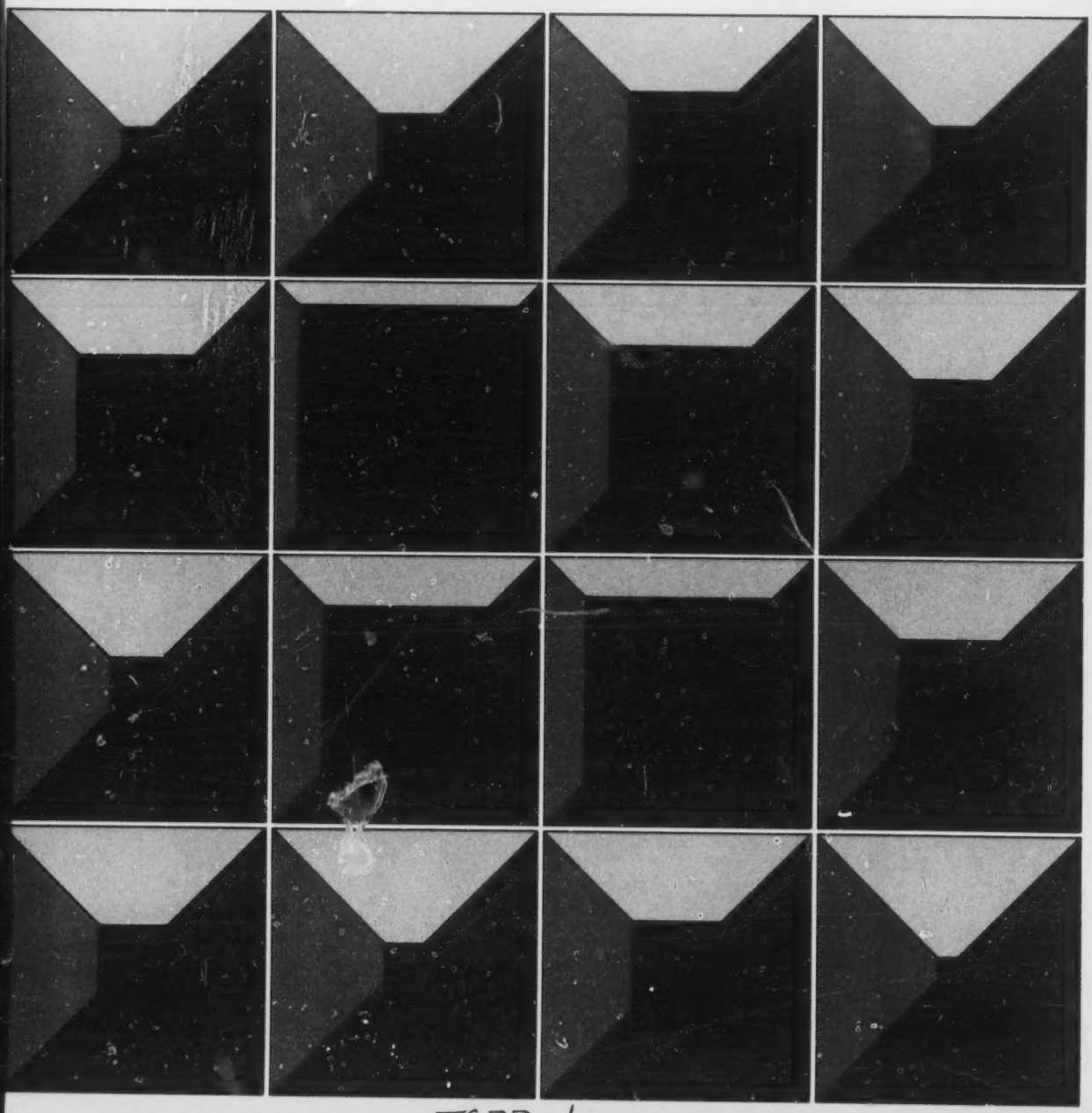
A CBO STUDY

Federal Support of U.S. Business

January 1984

Congress of the United States
Congressional Budget Office



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FEDERAL SUPPORT OF U.S. BUSINESS

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Congressional Budget Office

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NOTES

Except where noted, all dates are expressed in fiscal years.

All sums are expressed in current dollars except as noted.

PREFACE

U.S. industrial primacy is being challenged internationally as never before. There is a perception that much of this competition is subsidized by foreign governments, while the U.S. government gives relatively little assistance to American firms. This study, made at the request of the House Budget Committee, attempts to show the size of federal aid to business and to project its growth in coming years under current programs. In keeping with the mandate of the Congressional Budget Office (CBO), the report makes no recommendations.

Philip Webre of CBO's Natural Resources and Commerce Division, prepared the report under the supervision of David L. Bodde and Everett M. Ehrlich. Mark Steitz contributed substantially to the analysis in Chapter III. Paul Wilkin provided computational and research assistance. The author would like to thank members of the Natural and Physical Resources Cost Estimating Unit and the Tax Analysis Division for their generous assistance. He also appreciates the comments of Valerie Amerkhail, Edward Brigham, Roberta Drews, George Eads, Richard Emery, Sally Ericsson, Kenneth Leventhal, Marvin Phaup, Diedre Phillips, Elliot Schwartz, Carolyn M. Sherman, Peter Taylor, James Verdier, and James Vertrees. Any errors, however, remain the responsibility of the author. Francis Pierce edited the report with the assistance of Nancy H. Brooks, and Deborah Dove typed the many drafts.

Rudolph G. Penner
Director

January 1984

CONTENTS

		Page
PREFACE		iii
SUMMARY		ix
CHAPTER I.	INTRODUCTION	1
	Industrial Support	1
	Some Caveats	3
	Outline of the Analysis	3
CHAPTER II.	DEFINITIONS AND MEASUREMENT ISSUES	5
	Forms of Federal Support	5
	Programs Not Counted as Industrial Support	13
CHAPTER III.	INDUSTRIAL SUPPORT: OVERVIEW AND MAJOR PROGRAMS	17
	Multisector Tax Expenditures	17
	Direct Expenditures	24
	Credit Programs	29
	Sector-Specific Tax Expenditures	34
CHAPTER IV.	INDUSTRIAL SUPPORT BY SECTOR	39
	Targeted Support by Industrial Sector	39
	Targeted Support in its Industrial Context	48
	Multisector Tax Expenditures by Sector	54
	Effective Tax Rates	61
CHAPTER V.	INTERACTION WITH OTHER FEDERAL POLICIES	67
	Short-Run Economic Stabilization and Industrial Support	67
	Industrial Support and International Trade	69
	Investment and Industrial Support	73

CONTENTS (Continued)

		Page
CHAPTER VI.	STRATEGIES FOR BUDGETARY CONTROL	77
	Current Practice	77
	Strategies for Increased Budgetary Visibility and Control	79
APPENDIX A.	RESTRICTIONS ON GOVERNMENT PURCHASES . .	87
APPENDIX B.	INDUSTRIAL SUPPORT BY PROGRAM	91

TABLES

		Page
TABLE 1.	U.S. INDUSTRIAL SUPPORT: DIRECT EXPENDITURES AND CREDIT	18
TABLE 2.	MULTISECTOR INDUSTRIAL SUPPORT TAX EXPENDITURES IN 1984, BY SIZE OF ESTIMATED REVENUE LOSS	19
TABLE 3.	INDUSTRIAL SUPPORT DIRECT OUTLAY PROGRAMS FOR 1984, BY SIZE	25
TABLE 4.	INDUSTRIAL SUPPORT CREDIT PROGRAMS FOR 1984, BY SIZE	30
TABLE 5.	SECTOR-SPECIFIC INDUSTRIAL SUPPORT TAX EXPENDITURES IN 1984, BY SIZE OF ESTIMATED REVENUE LOSS	35
TABLE 6.	SECTOR-SPECIFIC INDUSTRIAL SUPPORT: MANUFACTURING	41
TABLE 7.	SECTOR-SPECIFIC INDUSTRIAL SUPPORT: AGRICULTURE	42
TABLE 8.	SECTOR-SPECIFIC INDUSTRIAL SUPPORT: TRADES AND SERVICES	44
TABLE 9.	SECTOR-SPECIFIC INDUSTRIAL SUPPORT: MINING	45
TABLE 10.	SECTOR-SPECIFIC INDUSTRIAL SUPPORT: FINANCE, INSURANCE, AND REAL ESTATE	46
TABLE 11.	SECTOR-SPECIFIC INDUSTRIAL SUPPORT: UTILITIES AND SANITARY SERVICES.	47
TABLE 12.	SECTOR-SPECIFIC INDUSTRIAL SUPPORT: COMMUNICATIONS.	49

TABLES (Continued)

		Page
TABLE 13.	SECTOR-SPECIFIC INDUSTRIAL SUPPORT: TRANSPORTATION	50
TABLE 14.	SECTOR-SPECIFIC INDUSTRIAL SUPPORT: CONSTRUCTION AND OTHER	51
TABLE 15.	THE INDUSTRIAL CONTEXT: SECTOR-SPECIFIC BENEFITS	53
TABLE 16.	INVESTMENT TAX CREDIT BY INDUSTRIAL SECTOR	55
TABLE 17.	MULTISECTOR TAX EXPENDITURES: ILLUSTRATIVE ALLOCATION BY SECTOR, 1984	58
TABLE 18.	EFFECTIVE TAX RATES	64-5
TABLE 19.	MULTISECTOR INVESTMENT INCENTIVES FOR 1984	74

APPENDIX TABLES

		Page
TABLE A-1.	RESTRICTIONS ON GOVERNMENT PURCHASES	88-9
TABLE B-1.	TAX EXPENDITURE ESTIMATES	92-5
TABLE B-2.	CREDIT PROGRAM ESTIMATES	96-8
TABLE B-3.	DIRECT EXPENDITURE ESTIMATES BY PROGRAM	99-100

SUMMARY

The federal government extends financial aid to business as part of its constitutional duty to promote industry and commerce. Financial aid takes three main forms. The most visible consists of direct spending programs, such as those to promote the development of new energy technologies. Another category of aid includes credit programs--for example, those of the Export-Import Bank or the Small Business Administration. The largest category of aid is the so-called tax expenditures--that is, special provisions in the tax laws designed to encourage some activity such as investment. Direct spending programs are projected to total $13.7 billion in fiscal year 1984. Business credit programs are projected to cost an additional $8.8 billion. The three largest tax expenditures are each projected to result in 1984 revenue losses larger than either the direct or the credit programs: the accelerated cost recovery system, $18.3 billion; capital gains, $16.4 billion; and the investment tax credit, $15.7 billion (see Summary Table).

This aid is distributed unevenly to industries, whether in absolute terms or relative to the industries' sizes. The agricultural sector receives by far the most direct aid, $7.7 billion in 1984, while the utility and the agricultural sectors dominate net credit outlays with $3.7 billion and $3.0 billion, respectively. The manufacturing sector and the trades and services sector receive the most tax benefits. But relative to their sizes, the agricultural sector and the utilities sector receive the most aid.

Business aid is provided predominantly through tax expenditures or credit programs, and hence does not undergo budgetary review in the same manner as do direct spending programs. Yet changes in economic conditions and national priorities may make regular review desirable. If the Congress wished to raise the budgetary visibility and control of the industrial support programs, it could:

- Make the programs more responsive to changed circumstances;
- Make all support explicit;
- Raise the budgetary profile of tax support; or
- Implement a credit budget.

This study describes the nature and magnitude of federal financial aid to industry and analyzes the implications of these courses of action.

SUMMARY TABLE. THE THREE CATEGORIES OF INDUSTRIAL SUPPORT PROGRAMS (In billions of current dollars)

	1984	1985	1986	1987	1988
			Expenditures		
Direct Expenditures	13.7	14.8	15.7	16.5	17.3
Credit Expenditures a/	8.8	8.0	7.6	7.4	7.4
			Credit		
Direct Loan Obligations	20.9	21.6	22.1	23.2	23.4
Loan Guarantee Commitments	17.7	18.5	18.5	18.5	18.6
			Tax Expenditures b/		
Accelerated Cost Recovery System	18.3	21.7	20.3	16.4	15.8
Preferential Treatment of Capital Gains	16.4	17.5	18.7	20.1	21.5
Investment Tax Credit	15.7	19.7	23.8	25.9	27.5
Reduced Rates on the First $100,000 of Corporate Income	6.5	7.0	8.1	8.8	9.1
Exclusion of Interest on State and Local Government Industrial Development Bonds	3.5	4.1	4.9	5.6	5.9
Expensing of Research and Development Expenditures	2.5	2.5	2.6	2.6	2.7
Excess of Percentage Depletion Over Cost Depletion: Fuels	2.1	2.1	2.3	2.4	2.6
Safe Harbor Leasing Provisions	1.9	1.6	1.3	1.0	0.5
Exclusion of Interest on State and Local Pollution Control Bonds	1.5	1.7	1.9	2.1	2.3
Deferral of Income of Domestic International Sales Corporations	1.2	1.1	1.1	1.1	1.1
Expensing of Exploration and Development Costs: Fuels	1.2	1.4	1.6	1.8	1.9

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Credit expenditures are the cost of providing loans and loan guarantees, measured by net credit program outlays.

b. Separate estimates are given for the eleven largest tax expenditure programs to avoid additive problems.

SOURCES OF FINANCIAL AID TO COMMERCE AND INDUSTRY

Federal agencies provide industrial support through a wide variety of programs. Only those with the explicit Congressional intent of promoting commerce and industry are included in this inventory of aid programs.

Tax expenditures, or special provisions of the tax code, provide the great bulk of business aid. Because of interactions between different tax provisions, the true total may not equal the arithmetic sum of individual tax expenditures. Consequently no total has been provided. The largest provide aid to many industries, while those targeted to specific industries or sectors are smaller, except for oil, gas, and fuel depletion allowances. The three largest tax expenditures--the accelerated cost recovery system (ACRS), the preferential treatment accorded capital gains, and the investment tax credit (ITC)--are designed to increase investment. These three alone account for a substantial portion of the industrial support for 1984.

Direct spending programs are the second largest channel of federal support, providing a projected $13.7 billion in 1984. The Commodity Credit Corporation accounts for $6.1 billion of this total through deficiency payments and other noncredit programs. The remainder is divided among research programs in agriculture, aeronautics, and energy; economic development; mining; and transportation.

Credit programs are the third channel of support, costing the government a projected $8.8 billion in 1984. This figure represents the net cost, including both interest subsidies and defaults, of loans and loan guarantees, which are projected to total $20.9 billion and $17.7 billion, respectively. The three largest credit programs, measured by net loan obligations--the Commodity Credit Corporation, the Rural Electrification Administration, and the Agricultural Credit Insurance Fund--represent 80 percent of net federal loans to business. These programs account for 75 percent of net federal outlays for business credit programs.

Excluded Programs

This inventory includes only programs with the primary intent of promoting commerce and industry. The tally excludes programs that may have significant industrial effects, but which the Congress undertakes for other purposes. Programs excluded have much greater costs than those included. Department of Defense purchases of goods and services are projected to approach $140 billion. Programs to aid individuals, such as medical and housing subsidies, equal $110 billion. Excluded research and development programs exceed $35 billion. In short, 14 programs that are

excluded, but have significant identifiable commercial effects, total almost $300 billion. Tax expenditures to benefit individuals that may have significant collateral industrial benefits are the deductibility of interest on home mortgages ($27.9 billion in 1984), the exclusion of employer contributions for medical insurance premiums and medical care ($21.3 billion), the deductibility of medical expenses ($2.6 billion), and the deferral of capital gains on home sales ($4.9 billion). On the other hand, some expenditures have been included about which there might be some legitimate question. Specifically, a portion of ACRS is not true business support, but rather compensation for the effects of inflation.

HOW FEDERAL AID IS DISTRIBUTED

Federal support is distributed unevenly to industries, both in absolute terms and in relation to their sizes. The agricultural sector receives the most direct aid, $7.7 billion in 1984, while the utilities sector receives the most credit aid, $3.7 billion. The mining and financial sectors have the largest specifically targeted tax benefits, while manufacturing and trades and services have the largest share of multisector tax benefits.

Relative to their size (as measured by value added), agriculture and utilities receive the largest federal support. The agriculture sector is projected to receive the equivalent of 8.3 percent of its value added in direct federal aid and an additional 3.2 percent through credit aid. The utilities sector is projected to receive the equivalent of 4.2 percent in credit aid. Other sectors' shares are considerably smaller, none receiving more than 1.0 percent. Relative to their size, the trades and services sector and the finance, insurance, and real estate sector receive less than average aid. The manufacturing sector receives an average level of direct and credit aid; however, it receives tax aid that is large relative to its size.

INTERACTION WITH OTHER POLICIES

Federal support programs do not act in isolation, but rather must be seen as interacting with other federal economic policies.

Economic Stabilization and Industrial Support

Except for some credit programs in agriculture and utilities, the bulk of industrial support is procyclical--that is, it tends to be greater during the upswings of the business cycle when such support may be least warranted. Aid through the tax system is clearly procyclical, despite carryforward and

carryback provisions. Outside of agriculture, the credit programs have no strong cyclical properties. There is some evidence that programs with fixed maximum interest rates are procyclical, but no statement can be made about programs that allow private parties to borrow at the Treasury borrowing rate.

Industrial and Investment Support

Investment incentives and support constitute a major portion of the industrial support programs. The three largest tax expenditure programs, ACRS, ITC, and lower rates on capital gains, are all designed to increase investment. Many of the credit programs also have this purpose. Overall, the amount spent on investment incentives is projected to equal approximately one-sixth of investment in 1984. In general, the usefulness and cost effectiveness of investment incentives is uncertain. While economists agree that these incentives spur new investment, they disagree widely as to the strength of the stimulus and the form it should take. There is a consensus that such provisions are most used when the other conditions for investment, such as market opportunity, economic growth, and business confidence, are favorable. Investment incentives are often intended to offset biases in the tax system against savings and investment, but they introduce biases of their own and have not restored tax neutrality among industries or among investments.

STRATEGIES FOR BUDGETARY CONTROL

Because of the dominance of tax expenditures, most programs in this industrial support inventory are entitlement programs. The Congress sets general eligibility requirements, and all who qualify receive the subsidy. This means that the vast majority of industrial support programs are not subject to budget review in the same way as direct spending programs.

To rectify this, the Congress has recently taken initial steps toward including credit activity in the budget process. These steps move in the direction of such management goals as visibility and control. If the Congress wants to continue progress in this direction, it might consider incorporating tax expenditures and credit programs more completely into the budget. Four strategies for bringing industrial support into the purview of the budget and increasing Congressional control over it would be: making federal aid programs more responsive to changed circumstances; making all federal support explicit; raising the budgetary profile of tax expenditures; and implementing a credit budget.

Increasing Responsiveness. Many industrial support policies continue long after the conditions that gave birth to them have changed. To be sure, devices for regular review exist, such as sunset provisions, but these are not universally applied and, when used, are not necessarily effective.

Making Federal Support Explicit. Many industrial support program costs are hidden and not voted on explicitly by the Congress. This is especially true of credit programs. By defining more carefully the dimensions of these programs, the Congress might be able to see more clearly the true costs and benefits. Similarly, the Congress might wish to fix the size of the interest rate support, which can change dramatically in an era of fluctuating interest rates. Fixing the size of the support would allow the Congress to set its budget priorities.

Insuring Budgetary Review of Tax Expenditures. The House of Representatives is currently considering a proposal to include changes in the level of tax expenditures in the budget resolution. Since tax expenditures are so important, good budgeting procedure should take account of them and attempt to discipline their proliferation. This would require weighing the benefits of increasing the information in the budget resolution against the costs of increasing the arbitrariness and cumbersome nature of the budget process.

Implementing a Credit Budget. The House is also considering full implementation of a credit budget. The current treatment of credit resembles the way direct spending was treated before the 1974 Budget Act: the aggregates are available for informational purposes, but binding decisions are made on a program-by-program basis. Implementation of a credit budget would allow the Congress to control aggregate new lending, rather than just the current cash requirements.

FEDERAL SUPPORT OF U.S. BUSINESS

CHAPTER I. INTRODUCTION

Federal programs to aid business represent both a claim on federal budget resources and, in the case of several industrial sectors, a sizable share of their contribution to the economy. This paper details the programs that provide this support and places such aid in its industrial and budgetary context.

The programs dealt with were not conceived as parts of a whole. They are the result of separate initiatives in support of a variety of legislative objectives. Some are designed to aid specific sectors of the economy, such as utilities. Some are designed to aid smaller firms. Yet others are intended to reward specific private commercial activities such as research and development. Although the Congress has never considered these programs together, it is useful to treat them as a group embracing the federal resources devoted to a specific purpose: promoting commerce and industry. In this sense, the report is analogous to those sections of the President's Budget--such as Special Analysis H, Federal Aid to State and Local Governments, or Special Analysis K, Research and Development--treating federal programs housed in different departments and different budget functions as a group. This paper focuses on financial aid to industry.

INDUSTRIAL SUPPORT

Cataloging industrial support raises questions of methods and assumptions. Two central issues are which programs to include as industrial support and how to estimate the cost of federal credit extended to industry. This study does not attempt to resolve these issues; judgments have been made about them, and there may be substantial room for disagreement. In short, this industrial support catalog should be thought of as illustrating general trends and central thrusts of policy, rather than as defining the role of federal aid in the economy.

While many Congressional actions promote industry and commerce, only those in which the expressed intent is financial assistance to business will be considered in this industrial support catalog. This serves to eliminate the collateral, and possibly unintended, consequences of actions taken with regard to other problems. Nevertheless, deciding whether a program was intended to promote industry remains difficult. The remainder of this chapter and the next chapter define the general rules used to decide

29-559 O - 84 - 2

which programs would be included, and discuss the definitional and measurement issues involved.

Policies to promote industry can include structural support in which the government defines the arena in which business has to operate, the so-called "rules-of-the-game." An example of this benefit is patent protection. The government can also offer indirect financial aid, in which the economy but not the government pays the cost of aiding an industry, as in the case of protective tariffs. Finally, the government can support an industry directly. This analysis is solely concerned with the third type of aid, direct financial support.

The report defines direct financial support as that for which the government receives no equivalent benefit in return. Rather, the aid is intended to affect prices or costs in industry so as to encourage some activities in preference to others.

The three types of programs that the federal government uses most often to provide financial support to commerce and industry are direct expenditure programs, credit programs, and tax expenditures. **Direct expenditure programs** include research and development programs, direct subsidy programs, informational programs, and directed procurement programs such as the Buy America Act. 1/ **Credit programs** include loan programs and loan guarantee programs, such as the Commodity Credit Corporation loans or Export-Import Bank loan guarantees. **Tax expenditures**--special tax concessions designed to encourage some particular activity--are the remaining channel of support. The tax credit for business investment is one example of a tax expenditure designed to promote commerce and industry.

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1. Only a part of the cost of goods bought under the Buy America Act represents the incremental cost of that law. The rest, and presumably the bulk, of the costs of such purchases represents payment for the good or service in question. While possibly large in the aggregate, the costs are diffused throughout the budget with every procurement item. Calculation of this sum would be difficult, if not impossible, and so has not been included. (For more details on these programs, see Appendix A.) Systematically selling federal resources at less than market price, especially in the cases of water and land resources, is also a form of industrial support. Like the Buy America purchases, budgetary costs of such systematic undercharging are scattered throughout the budget. See below for more detail on infrastructure expenditures.

SOME CAVEATS

While this study is a compilation of the ways in which the Congress directly promotes business, it does not appraise the worthiness or success of each endeavor. Many of these support programs are very cost-effective and contribute significantly to domestic commerce and industry, which is their intended consequence. Others may be less effective. This analysis also refrains from asking whether the benefits of a given program go to the intended party. The question of misdirected benefits, while important, is best answered by detailed examination of programs, which is beyond the scope of this paper.

Again, this report does not measure the economic effects of industrial subsidies but only the budgetary costs of programs to promote industry. For that reason, it includes a different group of programs than if economic subsidies had been the intended object of analysis. Though the two kinds of programs are obviously closely related, they have different goals and methods. An analysis of subsidies would have to consider their ultimate beneficiaries. For instance, the federal government provides operating subsidies to keep certain airline routes open. While these payments are made to the airlines, a portion of the economic benefits goes to the residents of the cities served. Without a detailed analysis of the circumstances, it is not clear who benefits and how much. While such payments are included in this tally, an inventory of subsidies might include them only in part.

This report can best be described as a catalog of federal payments to corporations and individuals for engaging in specified commercial activities. It draws no conclusions as to the ultimate beneficiaries of the federal payments, nor does it systematically discuss the success of such payments in increasing the subsidized activities. 2/

OUTLINE OF THE ANALYSIS

The remainder of the paper uses the above categories to analyze industrial support. Chapter II examines definitions and measurement issues. Chapter III presents an overview of the industrial support budget and examines the major programs in each category. Chapter IV shows how industrial support varies by industry. Chapter V discusses the relationship between industrial support policies and other federal policies, most notably macroeconomic policies. Chapter VI presents criteria for improving the delivery of such aid.

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2. For an analysis of subsidies, see Joint Economic Committee, The Economics of Federal Subsidy Programs (1972).

CHAPTER II. DEFINITIONS AND MEASUREMENT ISSUES

Any analysis of federal financial aid must be performed within definitional boundaries that are somewhat arbitrary. The purpose of this chapter is to define these boundaries, address analytical issues pertaining to the measurement of federal support, and point out what has been excluded. This is done within the context of the three ways that financial aid appears in the federal budget: as direct expenditures; as loans and loan guarantees; and as tax expenditures.

FORMS OF FEDERAL SUPPORT

The primary boundary is federal intent to support industrial activity. Within that boundary, federal support can take three budgetary forms: funds spent directly for selected assistance; provision of credit or guarantees of private loans; and selective tax reduction. This section defines these forms and discusses measurement and methodological issues involved with each.

In estimating money amounts, this report assumes that 1983 programs continue unchanged over the years of the estimate. The credit and direct expenditure estimates are those of CBO, while the tax expenditure revenue loss estimates come from the Joint Committee on Taxation (JCT). Consequently, these estimates reflect neither later Congressional action nor the President's 1985 Budget. However, because tax expenditures dominate the aid, most of these programs will continue roughly at the same level, unless the economy changes drastically.

Direct Expenditures

The most direct way for the Congress to provide aid to an industry is to award it money directly or to spend the money on the industry's behalf. The major categories of programs in this area are research and development, direct payments, and statistics and other basic information. The following sections discuss which programs in each of these areas were included in industrial support. The individual programs and their budgetary effects will be discussed more fully in Chapter III.

Research and Development. Development of new commercial technologies is one of the services the government often performs for businesses.

Thus, the commercialization portion of the total federal research and development budget has been included. Few National Aeronautics and Space Administration (NASA) and no National Science Foundation (NSF) programs have been included. While these programs ultimately may have commercial benefits, the programs are intended for purposes other than commercial aid. The only NASA program included was the aeronautical research program, which is undertaken to help U.S. commercial aviation. Similarly, except for its manufacturing technology program, Department of Defense research programs have not been included in this tally of industrial support research programs.

Direct Subsidies. Agencies of the federal government provide direct subsidies to firms through cash payments. This method is especially used in transportation, where some U.S. firms are at a competitive disadvantage and where certain routes would close without federal subsidies. Among the largest of these subsidies are construction and operating subsidies to the maritime industry, and payments to airlines to keep certain routes open.

Statistics and Technical Information. Federal agencies provide market information to businesses and their clients in hope of promoting commerce. By increasing the amount of information in the marketplace, federal agencies make transactions easier and reduce uncertainty to sellers and buyers alike. Subjects on which information is disseminated include foreign market development, surveys of natural resources in the United States leading to commercial exploitation, and publication of commercial standards through the Cooperative Extension Service or the National Bureau of Standards.

Credit Programs

Federal agencies provide credit in two primary ways: loans and loan guarantees. Loans are more expensive to the government initially, while loan guarantees allow the government to leverage its funds for greater effect. Loan programs help industries in a variety of ways. Federal agencies make credit available to businesses that could not get credit elsewhere, such as Farmers Home Administration farm operating and ownership loans. Other programs provide loans with interest rates below the market rate or even below the federal government's cost of borrowing. For example, the Rural Electrification and Telephone Revolving Fund provides loans to rural electric cooperatives at rates of 5 percent.

Federal loan programs also help business by providing generous repayment schedules. The Export-Import Bank permits much longer periods for repayment than would commercial banks for similar loans. The federal loan

agencies are also reluctant to foreclose on businesses that are behind in repayment, and will often carry loans beyond the point of clear default.

Similarly, federal loan guarantees perform a variety of services for private firms. Federal guarantees enable lenders to reduce the risk premiums in their loan rates. In some cases they provide businesses access to private credit that they would not otherwise receive. For instance, without federal guarantees, the Chrysler Corporation would have had difficulty borrowing during its period of troubles.

Credit Programs' Net Costs. There is no single satisfactory way of measuring the costs of these credit programs to the government. 1/ Estimates of aggregate credit activity, such as total amounts loaned or guaranteed, are not comparable to direct spending since loans are usually repaid and firms do not typically default. On the other hand, counting only administrative and salary costs would understate the costs to the government because it would not include defaults and the cost of lending at interest rates below the government's borrowing cost.

Costs for credit programs shown in the budget are "net credit program outlays." Net credit program outlays equal new direct loans less repayments, costs of interest subsidies, and guarantee defaults. These, however, understate the potential liability or "exposure" of the government. Consider, for example, a program where new loans equal repayments each year; such a program would show no outlays, yet the outstanding debt is a federal exposure. Each new loan extends the federal exposure. In a rapidly growing loan program, this approach would also overstate federal cost, since each year's outlays would be larger than the previous year's repayments. Similarly, new loan programs, which do not have a large stream of repayments, would have a large budgetary net cost.

Despite the measure's incomplete nature, this analysis will use simple net credit program outlays as the cost to the government. There are two major advantages in doing so: net program outlays are easily computed, and they are also consistent with the cash flow principles of unified budget accounting. Thus, the estimates of federal costs of credit programs presented here will be estimates of the direct outlay costs of such programs. To give a more complete picture of federal credit programs, the aggregate program figures will also be shown: the direct loan obligations, to indicate

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1. For a full discussion of costs, see: Congressional Budget Office, An Analysis of the President's Credit Budget For Fiscal Year 1984 (March 1983); and Office of Management and Budget, Budget of the United States, Fiscal Year 1984, Special Analysis F, Federal Credit Programs.

potential for loss and federal borrowing requirements, and primary loan guarantees to indicate contingent liability. 2/

Another potential tool for measuring the cost of credit programs to the government would be the differential between the rate a federal agency might charge and that available to that borrower for a loan of the kind in question on the open market. 3/ The annual value of interest subsidies to borrowers equals this interest rate differential times the volume of loans. To measure the full cost of a new loan extended in any given year, it is necessary to specify this annual interest subsidy for the life of the loan and to convert the stream to its discounted present value. Thus, each new loan subsidized would have associated with it a present value of the subsidy. For example, the Office of Management and Budget (OMB) estimates that in 1982 each $100 worth of new loans for rural housing resulted in $64 of "net present value subsidy." 4/

While such an analysis is conceptually useful for individual credit programs, it is less appropriate for aggregate budget analysis. First, the U.S. budget is on a cash flow basis, and hence present-value dollars are not equivalent to direct outlays. 5/ Second, calculating the present value of the interest subsidy presents intractable computational problems. For one thing, market and Treasury interest rates are not known with any degree of confidence for 18 months ahead, let alone for the 35-year life of some loans. Also, federal credit programs are often unique in lending to persons whom the market has explicitly rejected or in making the kinds of business loans that markets do not make; hence the appropriate market interest rate is not easy to determine. Finally, each credit program has unique features that

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2. Following CBO convention, this report attributes Federal Financing Bank activity to originating or requesting agencies. See Congressional Budget Office, An Analysis of the President's Credit Budget for Fiscal Year 1984 (March 1983) and The Federal Financing Bank and the Budgetary Treatment of Federal Credit Activities (January 1982).

3. The market rate, rather than the Treasury borrowing rate, would be the appropriate rate for most borrowers because the market interest rate contains an implicit premium to allow for defaults.

4. Budget of the United States, Fiscal Year 1984, Special Analysis F, Federal Credit Programs.

5. Perhaps the most prominent example of this is direct government investments in, for instance, federal office buildings: these are accounted for on a strictly cash flow basis.

are difficult to value without a detailed analysis of the program and recipient. Such detailed analysis is beyond the scope of this paper.

Tax Expenditures

The term "tax expenditures" is applied to revenue losses that arise from provisions of the tax code extending selective or special tax relief to groups of taxpayers. To be classified as a tax expenditure for purposes of this paper, a provision must fulfill two criteria: it must be a special exemption from a general tax rule and it must be intended to provide a subsidy. While there has been controversy about the use of the term "tax expenditure," the central point is that, just as is the case with direct spending and credit programs, these special tax provisions are intentionally designed to influence taxpayer decisions--to alter the allocation of resources in the economy that would have otherwise obtained. 6/

Although this paper includes corporate tax expenditures in the industrial support budget, objections to doing so have merit. Because dividends are taxed twice, once as part of corporate net income and then again as part of individual income when actually paid out, the corporate income tax as a whole might be thought of as "negative" industrial support. Tax expenditures, according to this argument, are simply reductions in the negative support, rather than positive support. Although this argument has intuitive appeal, the report follows convention and counts corporate tax expenditures as support in their own right.

Tax expenditures are entitlements, in that any person or firm that meets the requirements of the tax code is eligible for the special treatment. The costs of the provision, in any year, will depend on the number of taxpayers eligible and their tax liabilities. The lack of an appropriated ceiling increases the variability of such expenditures.

Forms of Tax Expenditures. Tax expenditures take four forms. In one form, taxable income is reduced by exclusions, exemptions, or deductions. For example, the interest on an industrial development bond (IDB) is

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6. For a more complete discussion of the theory and analysis of tax expenditures, see U.S. Senate, Committee on the Budget, Tax Expenditures (March 1982); Congressional Budget Office, Tax Expenditures: Current Issues and Five-Year Budget Projections for Fiscal Years 1984-1988 (November 1983); and Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988 (March 1983).

excluded from the taxable income of the bond's purchasers. A second form of tax expenditure applies preferential rates to a portion of income, such as the reduced rates on the first $100,000 of corporate income. In a third form, the Congress grants credits, which are subtracted from tax liabilities as ordinarily computed, as it did in the case of incremental research and development expenses. Finally, taxes can be deferred either by delaying recognition of income or by accelerating use of future years' deductions, as with accelerated depreciation. Tax deferral provides the equivalent of an interest-free loan from the government to the taxpayer. The relative value of each type of tax expenditure will vary with the taxpayer, his marginal tax rate, and the other deductions for which he is eligible.

For purposes of this analysis, tax expenditures will be divided into sector-specific and multisector categories. Some tax expenditures directly benefit only firms in one industry or sector. For example, special treatment of intangible expenses incurred in drilling for oil and gas benefits only firms and individuals engaged in such activities. Other tax provisions provide tax relief to persons in more than one industrial sector. One example of a multisector tax expenditure would be the investment tax credit, which benefits, albeit unevenly, firms in many sectors of the economy.

Definitional Issues. The definition of tax expenditures used in this report is based on the distinction between the basic structural features of an income tax and those provisions that are exceptions to the basic rules. The basic features are generally referred to as the "reference" tax rules. These rules include the general rate schedules and exemption levels, the general rules defining who is subject to tax and what accounting period should be used, and all deductions for the costs of earning income. Since the reference tax rules are an integral part of the income tax, they are not considered tax expenditures, but rather form the standard against which tax expenditures are selected and measured. Although there is general agreement about the reference tax rules, tax analysts do not agree on a few specific provisions that some consider part of the basic structure and others define as tax expenditures.

The most important disputed provision is the accelerated cost recovery system (ACRS), which provides for rapid depreciation of new investments. The Reagan Administration argues that every tax system needs a depreciation system for investment and that ACRS represents not a deviation from general tax rules but rather one of the general tax rules. [7] However, the general rule for determining business net income is that the cost borne by the firm in producing and selling goods or services is

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7. Budget of the United States Government, Fiscal Year 1984, Special Analysis G, Tax Expenditures.

deductible. Depreciation is simply the cost to the firm of the capital consumed in the production process. Since ACRS does not represent an attempt to approximate this general rule, being in large part designed to encourage investment rather than to simulate the lives of capital assets, this analysis classifies it as a tax expenditure, as have previous CBO studies.

Another major tax expenditure over which there is disagreement is the reduced rate on the first $100,000 of corporate income. While some analysts see the reduction as a general tax rule, this analysis concurs with previous CBO studies in finding that it is intended to promote small business and therefore should be classified as a tax expenditure.

With regard to other less significant tax expenditures, this analysis uses the previous CBO classifications. However, the inclusion of any program in the tax expenditure budget, or the industrial support budget, represents no implicit judgment about the program's appropriateness or usefulness.

Measurement Issues. The measurement of tax expenditures is a topic of considerable debate. While this is discussed extensively in CBO's annual report on tax expenditures and in Special Analysis G of the President's Budget, three issues are of particular concern to the evaluation of industrial support tax subsidies. First, the meaning of totals of individual revenue loss estimates is controversial. Some argue that these totals are not useful for policy purposes because of interaction effects: repealing one tax expenditure often raises or lowers the revenue loss attributable to another provision. 8/ It should be noted, however, that this problem is not unique to the tax expenditure budget; similar interactions exist on the direct spending side of the budget. 9/ Indeed, the "totals problem" exists in any set of related entitlement programs. Given the level of uncertainty surrounding

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8. For example, in the case of exclusions, the elimination of one provision might force a taxpayer into a higher marginal tax bracket, thus raising the value of remaining exclusions and deductions to the taxpayer. In the case of itemized deductions, elimination could lead the taxpayer to not itemize, thus eliminating the value of remaining deductions.

9. Consider, for example, the effect on Social Security outlays of changing unemployment insurance outlays. If unemployment benefits fall, retirement will become a relatively more attractive alternative for some individuals and Social Security outlays will rise. Conversely, should unemployment benefits rise, many of these individuals will opt for unemployment rather than retirement and so Social Security outlays will fall.

the estimates of individual revenue losses and their potential for interaction, this analysis does not add up tax losses.

Second, the tax expenditure revenue loss estimates are not the amount of money that would be saved if those provisions were eliminated: in no sense do they represent avoidable costs. (Many credit program outlays are also unavoidable, representing present costs of previous commitments.) Repeal could not be retroactive. The federal government would bear costs of actions taken before repeal. For example, even though the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) tightened the requirements on finance leasing (described more fully in Chapter III), it still bears the costs of agreements entered before the tightening of the requirements. In addition, the repeal of a tax expenditure could change the behavior of firms and individuals who use it. These changes in behavior could, in turn, alter their tax liabilities.

Analysts measure tax expenditures in two general ways: as revenue losses and their outlay equivalents. The revenue loss from each tax expenditure is estimated by comparing the revenue raised under current law with the revenue that would be raised if the specified provision did not exist, assuming that taxpayer behavior and all other tax provisions remained the same. On the other hand, under the outlay equivalent approach, a tax expenditure's cost begins with the amount of direct support that would provide the same benefit to the recipients, increasing it to include the additional federal, but not state or local, income taxes that would have to be paid on the direct support. The outlay equivalent has the advantage of giving a better sense of the relative cost to the government of providing the same level of benefits through different mechanisms. However, since this report is concerned with the current cost to the government, rather than an equivalent level of benefits to recipients, the revenue loss measure is used.

The final measurement issue concerns the effects of inflation on depreciation and capital gains provisions. Inflation distorts the historical cost accounting system on which depreciation and capital gains provisions are based, by eroding the true value of the original costs. Depreciation deductions thus become understated, while capital gains are overstated.

To the extent that the Congress intended the depreciation and capital gains provisions to compensate this inflationary effect, it has been argued, these provisions should not be considered tax expenditures. But these are nonetheless included in the industrial support budget for two reasons. First, the current tax system is not, on the whole, indexed for inflation; the "normal" tax code might well be biased against investment in an inflationary period. More persuasive, however, is the fact that each provision more than compensates for inflation--the Congress explicitly stated that its intent was

to subsidize investment in each case. This raises the problem of separating out the inflation correction from the subsidization elements of the revenue losses attributable to these provisions. No reliable way of doing so exists at present, although various studies are in progress.

These measurement difficulties combine to dictate that this analysis should be considered as illustrative of the central thrusts of federal policy, rather than as defining or measuring their impacts.

PROGRAMS NOT COUNTED AS INDUSTRIAL SUPPORT

One consequence of the decision to include in industrial support only those policies and programs that the Congress primarily intended to use to promote commerce and industry is that whole categories of federal actions that can have profound effects on specific industries and enterprises are not included. This section seeks to draw out the implication of that restriction. Each subsection presents a category of policy or program excluded, with some examples and the rationale for exclusion.

Macroeconomic Policy. Macroeconomic policy instruments, such as generalized tax cuts or increases in the money supply, are not included. These policy actions are not directed specifically at industry or commerce, but rather at the economy as a whole. Nor does this analysis discuss the differential effects of monetary or fiscal policy. Different sectors of the economy will be affected differently by changes in interest rates resulting from policy actions. While the question of how such policies affect specific sectors and industries may be important to economic decisionmakers, these are not support policies for individual industries.

Similarly, the very structure of the tax system, and hence changes in rates, has profound implications for both the amount of commerce and the relative sizes of industries. Like the commercial effects of regulation, the tax structure is an important topic, but beyond the limits of this exercise. However, tax policies that are directed specifically at the promotion of industry and commerce, such as the investment tax credit or the accelerated capital recovery system, while they have macroeconomic effects, are primarily directed at increasing the returns to investment. Thus such tax expenditures will be included.

Benefits to Individuals. The Congress provides individuals or classes of individuals with benefits, such as food stamps or Medicare, because it believes all members of the group in question are entitled to such goods or services. These are called "merit goods." Although merit goods often stimulate the demand for the good or service provided (for example,

Medicare increases the amount of medical services used each year), the primary intent of the Congress is focused on the recipients: the industry benefits, though welcome and often touted, are not the primary concern. Merit goods will, therefore, not be included in the industrial support budget. Besides Medicare, other merit goods that may have significant industrial impacts are food stamps, the home mortgage interest deduction, and other housing subsidies. The Veterans Administration and Federal Home Administration mortgage insurance programs also have not been included in the tally of federal business credit programs since homeowners are the primary intended recipients. To the extent that these programs provide support for the housing industry, this catalog will understate total federal promotion of this sector.

Federal expenditures for these goods are significant. Among the largest programs are Medicare ($61.1 billion in 1984), Medicaid ($21.2 billion), food assistance, including food stamps ($17.0 billion), and housing assistance ($10.4 billion). Tax expenditures to benefit individuals that may have significant collateral industrial benefits are the deductibility of interest on home mortgages ($27.9 billion in 1984), the exclusion of employer contributions for medical insurance premiums and medical care ($21.3 billion), the deductibility of medical expenses ($2.6 billion), and the deferral of capital gains on home sales ($4.9 billion).

Federal Procurement. Federal expenditures for goods and services the government uses may have significant effects on the level of output of certain industries. However, like merit goods, these are generally purchased for reasons other than industrial stimulation. For example, the largest single category of federal purchases is for weapons systems. While military contracts have a stimulative effect on industries such as aerospace, national security is their prime purpose. In 1982, obligations for all federal purchases totaled $159.0 billion. Of this total, defense procurement accounted for $125.8 billion, including weapons purchases, construction, purchases of other goods and services, and research and development contracts.

As with merit goods, the programs excluded are larger than those included. Department of Defense (DoD) spending for procurement, operations and maintenance, and construction is projected to total $144.8 billion in 1984. While some civilian personnel costs are included in that estimate, most will be for purchases of goods and services from the private sector.

Non-industrial Research and Development. General research and development, performed both within the government and through contracts, may also have collateral impacts, but unless the research has very clear industrial goals, such programs are excluded from the list of industrial

support programs. Excluded programs include DoD research ($23.6 billion in 1984), general science including all but one National Aeronautics and Space Administration program ($7.9 billion), and health research ($4.3 billion). These three excluded areas alone are projected to cost the government $35.8 billion in 1984. 10/

Social Overhead Capital. The benefits of spending on social overhead capital, such as education, public health and safety, and infrastructure, are impossible to assign broadly to industry. Sewers or water lines, for instance, benefit the entire community, although occasionally new sewers can help a real estate developer or industrialist. Similarly, while educational expenditures are very important in training a capable work force, the primary beneficiary is the recipient of the education. Thus expenditures on social overhead capital are not included in the industrial support budget.

Furthermore, a great deal of infrastructure is paid for by user fees, as in the case of the Highway Trust Fund. There may be some cross subsidies within this fund, to the extent that users do not pay their full shares, but federal support is peripheral to this issue.

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10. Congressional Budget Office, The Industrial Policy Debate (December 1983).

CHAPTER III. INDUSTRIAL SUPPORT: OVERVIEW AND MAJOR PROGRAMS

Using the definitions outlined in the previous chapter, the Congressional Budget Office estimates that direct federal financial support of industry will total $13.7 billion in fiscal year 1984. In addition, federal loans to business are estimated at $20.9 billion in 1984, and new loan guarantee commitments at $17.7 billion (see Table 1). Tax expenditures that can be classed as industrial support will be much larger but cannot be estimated as a whole, although the 1984 revenue losses associated with individual provisions suggest a figure much larger than direct or credit expenditures. The three largest tax expenditures--the accelerated cost recovery system (ACRS, $18.3 billion), the preferential treatment accorded capital gains ($16.4 billion), and the investment tax credit ($15.7 billion) account for a substantial portion of all industrial support. The preponderance of tax expenditures in overall industrial support is clear: together they account for the vast majority of industrial support. (Appendix B presents a full listing of programs included in this tally.)

Largely because of the dominance of tax subsidies, most programs in the industrial support budget are entitlement programs. (The Congress sets general eligibility requirements, and then all who qualify may receive the subsidy.) Further, the vast majority of programs included herein have not been subject to the budget process in the same way as direct spending programs, although the Congress has recently taken major steps toward including credit activity in the budget process.

The remainder of this chapter consists of an overview of the major programs: multisector tax expenditures, direct spending, credit, and sector-specific tax expenditures. Chapter IV examines the impact of these spending programs by industry.

MULTISECTOR TAX EXPENDITURES

Tax expenditures have been the method most commonly used to support industry. Most of the support has been funneled through a relatively few large programs. The 1984 revenue losses estimated for the accelerated cost recovery system, preferential treatment of capital gains, and the investment tax credit are $18.3 billion, $16.4 billion, and $15.7 billion, respectively. Table 2 shows estimated support provided by the nine largest tax expenditures in 1984. The following sections of this chapter will briefly describe each of these provisions. More complete descriptions can be found

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TABLE 1. U.S. INDUSTRIAL SUPPORT: DIRECT EXPENDITURES AND CREDIT (In billions of current dollars)

	1984	1985	1986	1987	1988
			Expenditures		
Direct Expenditures	13.7	14.8	15.7	16.5	17.3
Credit Expenditures a/	8.8	8.0	7.6	7.4	7.4
			Credit		
Direct Loan Obligations	20.9	21.6	22.1	23.2	23.4
Loan Guarantee Commitments	17.7	18.5	18.5	18.5	18.6

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

NOTE: The table does not include tax expenditures, the most important of which are shown in Tables 2 and 5.

a. Credit expenditures are the cost of providing loans and loan guarantees, measured by net credit program outlays.

in a compendium of tax expenditures published by the Senate Budget Committee, Tax Expenditures: Relationships to Spending Programs and Background Material on Individual Spending Programs (1982).

Accelerated Cost Recovery System (ACRS)

The Congress enacted the accelerated cost recovery system in 1981 to stimulate business investment in plant and equipment. The provision is expected to cost $18.3 billion in 1984 compared to economic depreciation, making it the largest single industrial support. ACRS largely replaced accelerated depreciation provisions, which were last expanded in 1971.

The subsidy provided by ACRS is, in essence, an interest-free loan. The cost of an asset designed to produce income over several years would, under a normal income tax, be deducted over the useful life of the asset;

TABLE 2. MULTISECTOR INDUSTRIAL SUPPORT TAX EXPENDITURES IN 1984, BY SIZE OF ESTIMATED REVENUE LOSS
(In billions of dollars)

Tax Expenditure	1984 Revenue Loss
Accelerated Cost Recovery System	18.3
Preferential Treatment of Capital Gains	16.4
Investment Tax Credit	15.7
Reduced Rates on the First $100,000 of Corporate Income	6.5
Exclusion of Interest on State and Local Government Industrial Development Bonds	3.5
Expensing of Research and Development Expenditures	2.5
Safe Harbor Leasing Provisions	1.9
Exclusion of Interest on State and Local Pollution Control Bonds	1.5
Deferral of Income of Domestic International Sales Corporations	1.2

SOURCE: Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988 (March 1983).

each year's deduction would represent the decline in the asset's value. Under ACRS, firms are allowed to accelerate the deduction or "recovery" of the costs. By so front-loading the deduction of costs, firms show lower taxable income in early years, but higher taxable income in later years when the cost of the machine has been fully "written off." Thus, a firm will be able to defer the payment of taxes; this deferral is equivalent to an interest-free loan.

Under ACRS, most assets are classified as having depreciable lives of either 15, 10, 5, or 3 years, with most equipment falling into the five-year class. The lives are intentionally designed to be much shorter than the actual useful life of the asset, but the benefit differs for various types of investments.

Estimating the value of the ACRS provisions is difficult, largely because of problems in defining and estimating the revenues from the "normal" tax treatment of depreciation allowances. The estimates presented here assume that normal tax law would include some form of accelerated deduction over true useful life for equipment, since assets tend to decline in value faster in earlier years. (Since 1962, the tax rules on

depreciation have contained some acceleration, given then-normal inflation rates.) Similarly, this analysis assumes that the normal tax system would not include allowances for inflation. 1/

Preferential Treatment of Capital Gains 2/

Gains from the sale of capital assets held for more than one year receive preferential tax treatment. The lower tax rates afforded corporations and individuals by the general capital gains provisions of the tax code are projected to cost the federal government $16.4 billion in 1984. The benefit allows individuals to deduct 60 percent of the capital gain from income, leaving only 40 percent to be taxed. Thus, the maximum tax rate for individuals on capital gains is 20 percent (50 percent of the 40 percent that is taxable). For corporations, the benefit is that the tax rate on capital gains cannot exceed 28 percent in most cases, in contrast to the standard corporate rate of 46 percent. (Thirty-nine percent of net capital gains are preference items subject to the add-on minimum tax. If preferences are larger than the tax owed, 39 percent of the excess over the tax owed could be subject to the 15 percent minimum.)

A major rationale for the provision has been that without some form of special treatment the large taxes associated with selling an asset would retard the turnover of investments. The first special provision for individuals was added to the income tax in 1920; corporations first received preferential treatment for capital gains in 1942. The special treatment of capital gains provides the largest benefits to high-income individuals and corporations, as does any special deduction, since the value of the subsidy increases with the marginal tax rate.

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1. Inflation reduces the value of later-year deductions, thus perhaps making some form of acceleration beyond that called for by "economic" depreciation appropriate. Insofar as ACRS indeed represented an attempt by the Congress to offset these effects, it could be argued that it is not a tax subsidy for investment, but rather a move toward an indexed tax system. Since, however, ACRS is significantly more generous than an indexed system under current and projected inflation rates, the largest portion of the revenue loss must still be considered a subsidy for investment.

2. Other than for agriculture, timber, iron ore, and coal. The particular benefits accruing to these industries are included as separate line items in Appendix B.

A small portion of the revenue loss due to this provision results from noncommercial activities. Such activities include buying and selling collectibles. Nevertheless, the full amount is included because the intent of the provision is to promote commerce. The fact that individuals make use of it for purposes other than the intended one may be a flaw in its design, but does not change the purpose of the provision.

The Investment Tax Credit 3/

Taxpayers may generally receive a 10 percent tax credit for the purchase of machines and equipment. The credit does not apply to plant expenditures, and in the three-year ACRS class it is limited to 60 percent of the purchase price of assets. There are also special rules that limit the credit allowed for used equipment purchases. The provision will result in a $15.7 billion revenue loss in 1984.

The subsidy represents a federal discount on the price of capital goods. It is just as if the federal government paid 10 percent of the purchase price, except in the case of firms with insufficient tax liability to be able to absorb the credit they earn, since it is not refundable. It was first instituted in 1962, explicitly to stimulate investment. The credit was modified in 1964, suspended in 1966, restored in 1967, repealed in 1969, reenacted in 1971, liberalized in 1975 (first temporarily), and slightly changed in 1981. In 1982, the ITC was changed again.

Reduced Rates on the First $100,000 of Corporate Income

Corporations pay reduced rates on the first $100,000 of income, with rates gradually increasing from 15 percent on the first $25,000 to the full 46 percent rate on income over $100,000. The provision, designed to encourage small business, is projected to result in $6.5 billion of lost revenue in 1984. All corporations, regardless of net income, are eligible for the reduced rates on the first $100,000.

Some provision for lower marginal rules on the lowest income brackets has been in the tax code since 1936. The rate schedule was last amended beginning in 1983 by the 1981 Economic Recovery Tax Act (ERTA). It serves to reduce the tax owed by a firm having more than $100,000 of taxable income by $20,250--the maximum benefit available. The Congress

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3. Other than for employee stock ownership plans, rehabilitation of structures, reforestation, and leasing.

is considering phasing out this provision for corporations with net incomes in excess of $1.0 million.

Exclusion of Interest on State and Local Industrial Development Bonds (IDBs) 4/

State and local governments can issue bonds, the interest on which is not taxable to the bondholder, to finance various types of industrial development. Since the interest on the IDBs is tax exempt, bondholders will accept a lower interest payment. Further, although the state or local government issues the bond on behalf of a private concern, it does not need to back the security. Thus, the IDBs subsidize private investment in private firms selected but not supported by state and local governments.

The bonds, projected to result in $3.5 billion in lost federal revenue in 1984, are generally limited either to issues under $1.0 million or to those issues--regardless of size--designed to finance specific ventures, such as harbors, sports arenas, and solid waste disposal facilities. The benefits of the provision are split between the bondholders, the beneficiary firms, and the financial intermediaries. Their respective benefits depend upon the spread in interest rates between taxable and tax-exempt securities; the larger the difference (the lower the relative interest the private firm needs to pay to the bondholder), the larger the portion of the benefit that accrues to the businesses.

Many early IDB issues were used to finance industrial development in areas with surplus agricultural labor during the Great Depression. The use of IDBs grew throughout the postwar period until the Congress placed limits on them in 1969, largely to stem the growing use of IDBs to finance large corporate development. The subsidy also represented, in essence, an expenditure of federal funds controlled and determined by state and local governments.

In 1982, the Congress further restricted the use of IDBs in several ways. Property financed by small-issue IDBs is no longer eligible for ACRS treatment, but must be depreciated using a straight-line schedule. Small-issue IDBs, less than $10.0 million, will cease to be tax exempt after 1986. IDBs can no longer be used to build certain types of facilities, most notably recreational facilities and eating establishments. The Congress now requires states to provide the Treasury with detailed reports on all the IDBs they issue. TEFRA also requires states to hold public hearings to determine the local sentiment regarding the debt.

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4. State and local pollution control bonds are described separately below.

Expensing of Research and Development Expenditures

Firms are allowed to deduct the entire cost of certain research and development activities--mainly labor and materials--in the year they are undertaken, even though the activities are designed to produce income over a series of years. Just as with ACRS, this early deduction of costs represents the equivalent of an interest-free loan to the taxpayer of his deferred tax liability. The provision will result in $2.5 billion in subsidy for qualifying firms in fiscal year 1984. It was first put in place by the 1954 tax act; its purpose was to encourage and clarify the tax treatment of research and development expenditures.

The passage of ERTA added another benefit to research and development: it provided a 25 percent tax credit on increasing research activity eligible for expensing treatment above the firm's average. This provision is projected to cost the Treasury over $600 million in 1984.

Safe Harbor Leasing Provisions

Safe harbor leasing provisions are estimated to result in $1.9 billion in revenue loss in 1984. This revenue loss is, however, entirely attributable to leases signed before January 1, 1984; the provisions have been replaced for following years by more restrictive "finance leasing" provisions.

In general, the benefits of depreciation and investment tax credit provisions are available only to the owner of the investment. Thus, if the buyer of an asset does not have enough taxable income to take advantage of all the attendant tax benefits (if, for example, he qualifies for $20,000 of tax credits, but owes only $5,000 in taxes), the benefits are normally carried forward or carried back. One alternative is for the owner to sell the equipment to a firm that can absorb the tax benefit, and then lease it back at a discount. Before the 1981 tax act, such a transaction undertaken solely to reduce taxes might not have been legal. In 1981, however, the Congress legitimated such transactions for tax purposes, leading to the revenue loss shown above. But in 1982 it replaced these provisions with more restrictive finance leasing rules, which required that the lease have some "economic" justification beyond the reduction of taxes.

Exclusion of Interest on State and Local Pollution Control Bonds

Just as state and local governments can issue industrial development bonds, the interest on which is tax exempt, so they can issue bonds for the financing of pollution control facilities. As is the case with IDBs, the firm

guarantees the payment of bonds; the debts are in form, but not in substance, obligations of the state or local government. This provision is expected to result in $1.5 billion in reduced 1984 revenues.

Deferral of Income of Domestic International Sales Corporations

The use of Domestic International Sales Corporations (DISCs) is projected to result in $1.2 billion in lost revenue in 1984. DISCs are special corporations established as conduits for export sales. As such, they are "paper corporations" with no employees and no actual operations that allow their parent corporations to defer the payment of income taxes on a portion of their profits. In the case of most DISCs, 50 percent of the parent corporation's export-related profits may be allocated to the DISC. About 42 percent of the tax liability on these profits above a base level can be deferred indefinitely, amounting to about a 21 percent tax deferral for the parent corporation (0.5 x 0.42 = 0.21). The benefit is enhanced by use of special intercompany pricing rules governing the allocation of income between the DISC and its suppliers.

TEFRA reduced several corporate tax preferences, including those applying to DISCs. The act provided for a 15 percent cut in the DISC subsidy by increasing from 50 percent to 57.5 percent the share of DISC profits that must be distributed to shareholders as taxable dividends. The use of DISCs may be in violation of the General Agreement on Tariffs and Trade (GATT).

Other Tax Expenditures

In addition to the nine specific tax provisions detailed above, the Congress has enacted many other multisector provisions to encourage commerce. These serve many functions but, in general, result in smaller revenue losses than the provisions listed above. (See Appendix B for details of these tax provisions.)

DIRECT EXPENDITURES

Table 3 shows estimated 1984 outlays for the seven largest direct spending areas. These areas account for 90 percent of all direct outlays for industrial support. The following section will discuss each of these programs briefly.

TABLE 3. INDUSTRIAL SUPPORT DIRECT OUTLAY PROGRAMS FOR 1984, BY SIZE (In billions of dollars)

Program	Projected Outlays
Commodity Credit Corporation	6.1
Energy Supply: Research and Development	1.8
Economic Development	1.4
Agricultural Research and Services	1.2
Aeronautical Research and Technology	0.7
Water Transportation	0.5
Mining	0.5
Other	1.4
Total a/	13.7

SOURCE: Congressional Budget Office.

a. Total may not add because of rounding.

Commodity Credit Corporation

The Commodity Credit Corporation (CCC) has both credit and direct expenditure programs. This section briefly describes CCC direct spending programs. Like other CCC programs, their intent is to stabilize farm income by ensuring that farm commodity prices remain high. Direct payments of all types are projected to total $6.1 billion in 1984.

The largest CCC direct payment outlays are for deficiency payments. Deficiency payments are made to farmers participating in acreage limitation programs when the target price for a commodity exceeds the national average market price. The payment is the difference between the market price and the target price on the farmer's crop. In addition to deficiency payments, CCC makes purchases at higher than market prices to maintain prices, the dairy price support program being an example.

Commodity purchase programs impose costs on the government, in addition to the purchase prices, including storage, carrying, and disposal costs. Land diversion payments, directly or through payments-in-kind (PIK), also cost the government substantial funds.

Energy Supply: Research and Development Activities

The federal government supports a wide range of services to promote the development and improvement of energy supply technologies. These programs are projected to receive $1.8 billion in 1984, including $800 million in nuclear energy supports, $700 million in research and demonstration supports for fossil fuels, and $200 million in solar energy support.

Economic Development

The federal government uses Community Development Block Grants (CDBGs), Urban Development Action Grants (UDAGs), and Economic Development Administration (EDA) assistance programs to promote economic development. CDBGs, first authorized under the Housing and Community Development Act of 1974, provide flexible community and economic development support to units of local government. Housing rehabilitation and public works-related activities receive the largest share of the grants. UDAGs, authorized under the Housing and Community Development Act of 1977, assist severely distressed cities and urban counties by funding local economic development projects designed to stimulate new, increased private investment. Retail and office space, nonelectrical machinery, and fabricated metal products have been among the most frequent UDAG beneficiaries. Finally, EDA assistance programs are intended to aid areas with severe unemployment and low family income by developing public facilities and private enterprise to help create new, permanent jobs. However, only a portion of the funds for CDBG and UDAG can be considered industrial support. Using past program history as a guide, the analysis projects that industrial support outlays for the CDBG and UDAG programs in 1984 will be $400 million and $600 million, respectively. EDA economic development assistance program outlays are projected to be $300 million. Total industrial support outlays for economic development total $1.4 billion.

Agricultural Research and Services

Federal outlays for agricultural research and services are projected to amount to $1.2 billion in fiscal year 1984. Support is provided through five Department of Agriculture agencies: the Extension Service, with 1984 outlays of $340 million; the Agricultural Research Service, with outlays of $470 million; the Cooperative State Research Service, with outlays of $250 million; the Agricultural Marketing Service, with outlays of $40 million; and the Foreign Agricultural Service, with outlays of $77 million. All of these programs are expected to grow moderately but consistently over the next five years.

The Extension Service supports the widespread application of the latest technology in agricultural production and marketing, home economics, community and rural development, and related areas. The Agricultural Research Service conducts research in livestock and plant reproduction; the use and improvement of soil, water, and air; the processing, storage, and distribution of farm products; nutrition and food safety; and consumer services. The Cooperative State Research Service administers grants for research in agriculture, agricultural marketing, rural development, and forestry. The Marketing Service administers standardization, grading, inspection, information, and other related marketing services. The Foreign Agricultural Service promotes exports of farm products by maintaining marketing attaches at U.S. embassies abroad, running foreign demonstrations of U.S. agricultural goods, and providing various other services.

Aeronautical Research and Technology

The federal government supports industrial aeronautical research and development primarily through the Manufacturing Technology Program within the Department of Defense and transportation programs within the National Aeronautics and Space Administration. [5] These programs are projected to cost $700 million in 1984.

The Manufacturing Technology Program is designed to encourage the diffusion of advanced technology throughout the aerospace sector and so promote the efficiency and readiness of the defense industrial base. NASA programs are similarly designed to provide private firms with research and technology concerning the application of aerodynamics, propulsion, avionics, and related subjects. Under current policy, the NASA programs are explicitly designed to improve the safety, efficiency, and environmental quality of private air transportation.

The Manufacturing Technology Program is financed through various Army, Navy, and Air Force procurement accounts; it is thus difficult to obtain an exact projection of the program's cost. Program administrators project that $210 million will be spent in 1984, rising to $582 million in 1988. The NASA research programs are projected to rise from 1984 outlays of $504 million to $586 million in 1988.

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5. See Chapter II for a discussion of why certain related programs are not considered industrial support.

Water Transportation

The federal government supports the water transportation industry through Coast Guard and Maritime Administration programs. The Coast Guard has, since the 1960s, implemented a sizable research, development, test, and evaluation program to improve nautical safety and environmental protection as well as to increase law enforcement effectiveness. The Maritime Administration also runs a research and development program, which focuses primarily on improving the productivity and operating efficiency of the shipbuilding and ship operating industries. In addition, the Maritime Administration provides operating-differential subsidies to American ship operators, offsetting the differences between U.S. and foreign operating costs.

The Maritime Administration's operating-differential subsidies represent a preponderance of federal government support of water transportation. Outlays for operating subsidies are projected to rise from $425 million in 1984 at an annual rate of 4 to 5 percent to $501 million in 1988. Both the Maritime Administration's and the Coast Guard's research and development programs are expected to be authorized in the $20 million range between 1984 and 1988. Maritime research and development budget authority will, according to CBO baseline budget projections, rise 5 percent annually from $16 million to $20 million, while Coast Guard research and development authority is projected to rise at a slightly lower 4 percent rate, increasing from $21 million to $24 million over the period.

Mining

The federal government administers two programs intended to provide mainly for the mining sector. The Geological Survey conducts research and analysis and disseminates information aimed at increasing knowledge about the extent, distribution, and character of natural resources in the United States. Functions include topographical mapping, identification of mineral deposits and mineral resource estimates, monitoring of water resource quantity and quality, and hazard assessment. The Bureau of Mines is also primarily a research and factfinding agency, established to help ensure adequate mineral supplies for security and other needs. The Bureau conducts research on mine health and safety, conservation and development, extraction, and processing efficiency, recycling of solid wastes, and pollution abatement. The Bureau also performs land assessments and some mineral policy analyses. The major beneficiaries of these activities are the coal, metal, and industrial mineral industries.

In 1984, combined outlays for the Geological Survey and for the Bureau of Mines are projected to exceed $500 million. The Geological Survey, with $400 million in outlays, will account for the bulk of this figure. Over the 1984-1988 period, outlays for these two agencies are projected to rise to $600 million.

Other Direct Expenditure Programs

In addition to the program groups outlined above, the federal government spends money on behalf of business in a number of areas. In the aggregate, these programs are projected to spend $1.4 billion in 1984. (See Appendix B for details.)

CREDIT PROGRAMS

This section presents and briefly describes the major business credit programs. In 1984, the federal agencies are projected to provide $20.9 billion in direct loans to businesses in selected industries. The five programs presented in Table 4 account for 98 percent of this amount, or $20.5 billion in direct loans. Of the $17.7 billion in federal primary loan guarantees to businesses, these five programs account for $16.2 billion.

Rural programs account for the majority of new lending. The three largest rural programs, the Agricultural Credit Insurance Fund, the Commodity Credit Corporation, and the Rural Electrification Administration, represent 80 percent of federal loans to business. These programs also account for 75 percent of federal net outlays in support of credit programs.

Rural Electrification Administration

Since the 1930s, the Rural Electrification Administration (REA) has provided credit to rural cooperatives for rural electrification and telephony. In 1984, REA, through both the Federal Financing Bank (FFB) and the off-budget Rural Electrification and Telephone Revolving Fund (RETRF) is projected to provide $4.5 billion in loans. This figure is projected to remain constant in 1984-1988. The net cost to the RETRF of REA loans is projected to be $4.0 billion in 1984. 6/

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6. Because of later Congressional action, the estimates presented here are below the resolution baseline. Use of the baseline estimates would overstate REA activity. REA baseline estimates project $5.6 billion in direct loan obligations and $5.4 billion in net program outlays.

TABLE 4. INDUSTRIAL SUPPORT CREDIT PROGRAMS FOR 1984, BY SIZE (In billions of dollars)

Program	Direct Loan Obligations	Primary Loan Guarantee Commitments	Net Program Outlays
Rural Electrification Administration	4.5	0.0	4.0
Commodity Credit Corporation	7.4	3.0	2.1
Agricultural Credit Insurance Fund	4.6	1.3	0.8
Export-Import Bank	2.5	9.0	0.9
Small Business Administration Business Loan and Insurance Fund	1.5	2.9	0.6
Other	0.4	1.5	0.4
Total Business Credit Programs	20.9	17.7	8.8

SOURCE: Congressional Budget Office.

The REA uses two principal mechanisms in lending to rural cooperatives for capital investments. First, it provides direct loans through the RETRF. These loans are for 35 years and have a maximum interest rate of 5 percent. The second credit instrument is a loan guaranteed by the REA, but originated by the FFB as a direct loan. 7/ The REA-guaranteed loans have an interest rate equal to the Treasury's borrowing rate plus one-eighth of 1 percent.

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7. As was discussed in Chapter II, FFB loans are attributed to the originating agency. Thus, in Table 4 and Appendix B, FFB-originated, REA-guaranteed loans appear as direct loan obligations of REA.

The costs of subsidizing the interest rates on REA direct loans have risen sharply in recent years. As a result of these costs, the revolving fund's resources for absorbing interest subsidies may be exhausted in the near future under current policy. The Congress, however, is currently considering changes in the program that would forgive much of REA's debt to the Treasury and otherwise restore the soundness of the RETRF.

The largest portion of REA credit is provided through REA guarantees of FFB loans. The REA-guaranteed loans are primarily used for electrical generating facilities, such as nuclear plants. Many of these are jointly owned by REA cooperatives and investor-owned utilities. This joint ownership gives the investor-owned utilities access to financing on very favorable terms. For capital-intensive projects, such as nuclear plants, this financial advantage might be significant in determining their commercial viability.

Since the 1970s, the Congress has enacted a $4 billion to $5 billion minimum for the REA-guaranteed loan program. Since there are not sufficient borrowers to meet the legal requirements, the REA has had to qualify borrowers long before they need the funds. Thus, this provision has resulted in long lead times between obligations and actual disbursements.

Commodity Credit Corporation

The Commodity Credit Corporation (CCC) loan and guarantee programs are designed to aid in farm income stabilization and promote exports. In 1984, CCC loans are projected to total $7.4 billion. Loan guarantees are projected to total $3.0 billion. The net budgetary outlays are projected to total $2.1 billion. CCC is thus the largest credit program in terms of net direct cost to the government, accounting for 25 percent of all direct spending for industrial support credit programs.

The most important CCC program instrument is the non-recourse loan. Any farmer who participates in an annual price support program is eligible to receive a loan equal to the value of his crop, evaluated at a federally determined support price. The loans are typically for nine months, although loans for up to three years are made under the farmer-owned grain reserve program. At the end of the loan period, the farmer must either pay back the loan plus interest or--with no penalty or "recourse"--deliver his crop to the CCC.

Commodity loans thus act as price guarantees to the farmer. It is just as if the federal government paid for the crop, but left the farmer the option of selling it privately at a higher price for nine months and returning

the cash the government originally paid, plus interest. If the market price remains below the support price, the farmer will deliver his crop to the government and not repay the loan. If, on the other hand, the market price rises enough above the support price, the farmer will sell the crop in the market and repay the government with interest at the Treasury borrowing rate.

Thus, when commodity prices are depressed, the farmers deliver their crops to the government en masse and the government's outlays for these programs rise. The government must then bear storage, handling, and other costs of its inventories. While there is a chance that the federal government may eventually recover some of these costs from future grain sales from its inventories, the experience of this program has been that long-term expenses closely track outlays.

The level of support prices clearly has significant effects on government outlays and on farm income. If support prices are set too low, the riskiness of farming will rise and investment in this industry may fall. Since the high level of investment has been one of the factors contributing to high farm productivity, a fall in investment might have undesirable results. If the support price is set too high, the government will stimulate excess production, discouraging domestic demand and exports, and thus will have to purchase even greater stocks.

The CCC also has export credit programs in which it provides or guarantees loans for foreign buyers who import U.S. agricultural commodities. Direct loans totaled less than $50 million in 1982, while guaranteed loans exceeded $1.5 billion.

Between 1984 and 1988, new CCC loans are projected to rise slightly. From the 1984 high of $7.4 billion, direct loan obligations are projected to increase to $7.9 billion in 1988. Loan guarantees are projected to remain constant at $3.0 billion throughout the period, and outlays to rise from $8.3 billion to $10.3 billion. The actual outcomes will depend on weather and other crop conditions.

Agricultural Credit Insurance Fund

The Agricultural Credit Insurance Fund (ACIF) provides loans and loan guarantees for farm ownership and operating expenses, soil and water conservation or development, irrigation or drainage projects, disaster loans, and other agricultural endeavors. In 1984, the loan level is projected to be $4.6 billion. New loan guarantees are projected to be much smaller, amounting to $1.3 billion in 1984. In terms of net budgetary cost, ACIF loan and loan guarantee program outlays will total $800 million in 1984.

Loans carry more favorable terms than commercial lenders might provide. The maturities are generally very long--35 to 40 years--and the interest rate is substantially lower than a commercial lender would charge. The ACIF interest rate is equal to the rate it receives from the Treasury Department plus a small administrative fee. Further, for the roughly 20 percent of participants who have low income, the interest rate is reduced to one-half of the Treasury borrowing rate with a floor of 5 percent. Farm operating loans have shorter terms, roughly the same interest-rate structure. Disaster loans have the same terms as operating loans, but charge 8 percent interest. Loan guarantees have the same maturities as loans, but the rate is negotiated directly with the lender.

Export-Import Bank

The Export-Import Bank (Eximbank) promotes U.S. exports by providing loans and loan guarantees to foreign purchasers of U.S. goods. Annual Eximbank loans are projected to rise from $2.5 billion in 1984 to $3.8 billion in 1988. The loan guarantee program is projected to rise from $9.0 billion in new contingent liabilities to $10.0 billion over the same time period. In both of these cases, however, the rise is projected to be less than the rate of inflation. The net outlays are projected to fall from $900 million in 1984 to $50 million in 1988. 8/

The direct loan program provides loans at below-market interest rates to finance foreign purchases of U.S. goods. The loan guarantee program encourages commercial banks to extend credit to buyers by reducing the risk inherent in export financing. These guarantees are attractive because interest rates charged on such guaranteed loans are among the lowest available in the market.

Eximbank credits have been concentrated by industry. Since the mid-1970s, roughly two-thirds of Eximbank credits have gone for the purchase of aircraft and electrical power plant and equipment.

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8. Due to a drop in the demand for Eximbank credit resulting from the worldwide economic slowdown, the figures presented in this section are below those in the first resolution baseline. While most other spending and credit figures herein are based on the resolution baseline, use of Eximbank credit estimates would have resulted in an overstatement of actual credit activity. Eximbank projections from the resolution baseline estimate 1984 direct loan obligations at $4.6 billion and loan guarantees at $10.0 billion. Net outlays are projected to be $1.2 billion.

29-559 O - 84 - 4

Small Business Administration Business Loan and Investment Fund

The Small Business Administration (SBA) through its business loan and investment fund (BLIF) provides credit to small businesses unable to secure conventional financing. In 1984-1988 new BLIF commitments are projected to decline from $1.5 billion to $1.2 billion. The loan guarantee program, on the other hand, is projected to remain constant during this period at $2.9 billion. Net budget outlays are projected to rise slightly from $600 to $700 million.

SBA BLIF credit programs operate in a two-tier system. Firms that can show they do not qualify for conventional financing are eligible for loan guarantees. If, even with the federal loan guarantee, they are unable to secure a commercial loan, then the SBA will make a direct loan. The loans are written at an interest rate equal to one percentage point above the average yield on outstanding marketable obligations of the U.S. government with comparable maturities.

One consequence of the SBA selection criteria has been a very high default rate on its loans and loan guarantees. (In the event of a default of a loan guarantee, the SBA pays the commercial lender and assumes the loan.) The rate of default on SBA loan guarantees was 9 percent in 1983. Even this figure, however, is understated as the SBA will not foreclose on loans several payments in arrears. Since the Congress intended the SBA to make risky loans, a high default rate is a natural consequence.

Other Credit Programs

In addition to the six programs detailed above, the federal government provides credit to businesses through a variety of other credit programs. These programs, even in the aggregate, are not large, but can provide significant support to the firms receiving them. (See Appendix B for a detailed list.) In 1984, these programs are projected to make $400 million in direct loan obligations and $1.5 billion in primary loan guarantee commitments. Net program outlays are projected to total $400 million.

SECTOR-SPECIFIC TAX EXPENDITURES

Tax expenditures that apply to all industries were discussed at the beginning of this chapter. The following section deals with tax expenditures for particular sectors. Although the multisector tax expenditures are larger in terms of aggregate revenue losses, those that target specific sectors may be more vital from a sector point of view. The largest are the special

depletion allowances given the fuel extraction industries, which result in a revenue loss of $2.1 billion. Next largest is the revenue loss of $1.2 billion in 1984 from expensing fuel exploration and development costs. Accelerated depreciation of rental housing and commercial buildings results in a revenue loss of $1.2 billion. All the other sector-specific tax expenditures discussed in this section result in tax losses of less than $1.0 billion each (Table 5). 9/

TABLE 5. SECTOR-SPECIFIC INDUSTRIAL SUPPORT TAX EXPENDITURES IN 1984, BY SIZE OF ESTIMATED REVENUE LOSS (In billions of dollars)

Tax Expenditure	1984 Revenue Loss
Excess of Percentage Depletion over Cost Depletion: Fuels	2.1
Expensing of Exploration and Development Costs: Fuels	1.2
Depreciation of Income-Producing Buildings in Excess of Straight-Line	1.2
Expensing of Certain Capital Outlays: Agriculture	0.6
Deductibility of Patronage Dividends and Certain Other Items of Cooperatives	0.6
Excess Bad Debt Reserves of Financial Institutions	0.6

SOURCE: Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988 (March 1983).

Excess of Percentage Depletion over Cost Depletion: Fuels

Just as firms investing in plant and equipment "depreciate" the costs of their investment over the years the asset will produce income, so firms engaged in extracting fuels and minerals (oil, gas, coal, and other fuels) "deplete" the cost of discovering and developing reserves. Under standard

9. As with the multisector tax expenditures, the discussions that follow are taken from Tax Expenditures: Relationships to Spending Programs and Background Material on Individual Spending Programs (1982), published by the Senate Budget Committee. More detail can be found in that publication.

accounting practices, this depletion would be based on the actual costs incurred by the firm. Under the percentage depletion provisions, firms are allowed to write off a simple percentage of the gross income from the property. For gas and oil the allowance is 15 percent of gross income in 1984. Since with percentage depletion the firm can write off the original cost many times over, the tax expenditure represents a direct payment as well as an interest-free loan. The provision is expected to result in $2.1 billion in revenue losses in fiscal year 1984. There are various limitations on the use of the provision, however, the most notable being the exclusion of the major oil and gas companies. The main beneficiaries are the so-called independents--firms without significant refining or distribution capacity--but only for the first 1,000 barrels a day of oil or an equivalent amount of gas produced by them.

Expensing of Exploration and Development Costs: Fuels

The normal accounting standard for treating the costs of acquiring or improving an asset that will produce income over several years is to deduct those costs over the life of the asset. Many of the costs associated with exploration and development in the oil and gas and geothermal industries can be "expensed," that is, entirely deducted in the year incurred, rather than capitalized or spread over the useful life of the field or well. This provision is projected to result in a $1.2 billion revenue loss in 1984. The costs that are permitted this treatment, the "intangible drilling costs," include the amounts spent on fuel, labor, repairs, hauling, and supplies that are used in drilling oil and gas wells, clearing costs associated with preparing the site for drilling, and the non-salvageable costs of fabricating tanks, pipelines, derricks, and other oil field machinery. These costs typically account for 75-90 percent of total costs. This treatment of the deductions results in an interest-free loan from the government to the taxpayer (see the description of ACRS at the beginning of this chapter).

The most important limits on the provision involve "at risk" and "recapture." Firms and individuals can only expense the amount of money that is actually subject to potential loss, or "at risk." In addition, if the asset is sold, some of the gain will be taxed as ordinary income rather than as capital gain. This treatment permits "recapture" of the tax loss.

Expensing of intangible drilling costs applies only to successful wells. All expenses associated with unsuccessful wells are expensed since no useful asset has been produced.

Depreciation of Income-Producing Buildings in Excess of Straight-Line

Under standard accounting practices, the Internal Revenue Service (IRS) allows taxpayers to recover the costs of their durable assets that wear out or become obsolete by deducting a percentage of the cost of the asset from gross income. Typically the deductions are spread over the life of the asset. Taxpayers use one of several depreciation methods to calculate the portion of the asset cost to deduct each year: either straight-line or the accelerated method. For income-producing buildings put in service before 1981, the taxpayer can switch from accelerated to straight-line depreciation as the building ages and the near-term advantages of accelerated depreciation are exhausted. The tax life of the building has also been shortened to 15 years, or much less than the economic life of most buildings. Permitting the shortened and accelerated form of depreciation is projected to result in a revenue loss of $1.2 billion in 1984.

The argument for accelerated depreciation in the case of equipment and machinery is that they lose more value in their early years. (See the discussion of ACRS for more detail on depreciation rates and their effects.) Allowing similar treatment for buildings is generally believed inconsistent with their rates of economic decline, which are generally much slower than those of machinery and equipment.

Expensing of Certain Capital Outlays: Agriculture

The favorable tax treatment according certain farm capital expenses is projected to result in a 1984 revenue loss of roughly $600 million. Some farms, mainly individual and family-owned corporations, use cash accounting methods in the tax treatment of inventory and other goods held for sale. The IRS also permits these farms to expense some costs of developing capital assets. The treatment of these items deviates from normal tax practices, in which the cost of inventory is not deducted until the inventory is sold and in which the costs of developing capital assets are depreciated over their useful lives.

Deductibility of Patronage Dividends and Certain Other Items of Cooperatives

Under current law, cooperatives can deduct dividends from gross income. By contrast, regular corporations pay taxes on earnings disbursed

as dividends. Cooperatives can avoid the corporate tax by distributing dividends or by issuing certificates of "right" to their earnings. In essence, part of a cooperative's income is exempt from the corporate tax. The income distributed is taxed when it is received by the cooperative members as part of their income. This provision of the tax code is projected to result in a 1984 tax revenue loss of roughly $600 million.

Excess Bad Debt Reserves of Financial Institutions

The IRS generally permits businesses to deduct a reasonable allowance for bad debts as a current operating expense. Prior years' experience is conventionally used as the basis for the allowance. However, financial institutions compute bad debt reserves in excess of actual experience using a special formula. This excess reserve is projected to result in a 1984 tax revenue loss of roughly $600 million.

The actual formula varies by type of institution. Commercial banks are permitted to deduct 0.6 percent of outstanding loans for this purpose. Some other financial institutions may deduct up to 40 percent of taxable income, provided they meet other specified conditions.

Other Sector-Specific Tax Expenditures

Taxpayers in specific industries or sectors can take advantage of many tax provisions beyond those listed above. The remaining sector-specific tax expenditures are each projected to result in 1984 tax losses of $500 million or less. The full list of these measures can be found in Appendix B of this report and in the Senate Budget Committee tax expenditure compendium.

CHAPTER IV. INDUSTRIAL SUPPORT BY SECTOR

Chapter III viewed industrial support from the perspective of the federal budget; this chapter views it from the perspective of the receiving sector. Federal industrial aid programs are distributed very unevenly across sectors and are of differing importance to each sector. In this chapter, the aggregate federal programs are divided according to their sectoral targets, and each recipient sector's major sources of funds are discussed. The aid received by each sector is then described in relation to the sector's size.

In absolute terms, the agricultural sector receives the most direct aid and the second largest amount of credit support. Direct payments to agriculture are projected to total $7.7 billion in 1984, while net credit outlays are estimated at $3.0 billion. The utilities sector is projected to receive $3.7 billion in net credit outlays. On the tax side, the manufacturing sector receives the largest level of support, followed distantly by trades and services and mining. The mining sector receives roughly proportionate amounts of aid from both sector-specific and untargeted tax expenditures, while manufacturing and trades and services sectors receive the bulk, if not all, of their tax aid through untargeted tax expenditures.

Like the distribution of support by sector, the size of industrial support relative to the size of the recipient sector varies across sectors. Using value added as a measure of sector size (that is, gross output minus purchased inputs and declines in inventory or work in progress), this analysis found that the agricultural and utilities sectors received greater federal support than other industries. On the other hand, trades and services and the finance, insurance, and real estate sector received the least federal aid, relative to their size.

This chapter includes four main sections. The first discusses the targeted support afforded major industrial groups. The second section presents an overview of targeted support by sector in the context of their size. The third suggests an allocation for the untargeted tax expenditures; and the last section examines effective tax rates by sector to determine how the tax benefits are distributed.

TARGETED SUPPORT BY INDUSTRIAL SECTOR

In this section, the sources and amounts of targeted aid going to each industrial sector are presented. Each subsection outlines the cost to the

government of providing aid, the major mechanisms through which the support is provided, and the amount of federal credit extended to firms in the sector.

Sectoral allocation of credit and direct program benefits was done on the basis of past lending and spending patterns. To the extent that future spending and lending patterns change, the actual allocation will differ from that projected. But given the broadness of the sectors and the specific mandates of most direct and credit programs, these patterns should not vary greatly. The principal exceptions are programs of the Small Business Administration and some economic development programs. These represent a small fraction of outlays, however, and any errors would represent an even smaller portion of the total.

Manufacturing

The manufacturing sector does not receive as much aid through targeted measures as it does through more general measures (see below). The direct support it receives is projected to total $1.7 billion in 1984. Expenditures related to credit programs are projected to reach $1.0 billion (Table 6). The only sector-specific tax expenditure is the tax credit for doing business in U.S. possessions. (In fairness it should be pointed out that although the Congressional intent was not to help manufacturing alone, this has been the result. There are other untargeted tax benefits accruing mainly to one or two sectors, but this is the only one accruing to a single sector.)

Agriculture

Agricultural support is dominated by farm income maintenance programs, specifically those of the Commodity Credit Corporation (CCC) and the Agricultural Credit Insurance Fund (ACIF). Of the $7.7 billion the agricultural sector is projected to receive through direct programs, the CCC will account for over $6.1 billion (see Table 7). The agricultural sector also receives aid in the form of federal informational programs such as the Agriculture Research Service. In 1984, outlays for these programs are projected to total $1.2 billion. Credit program outlays are dominated by CCC and ACIF. Of $3.0 billion that federal agencies will spend in this regard, these two agencies account for $2.9 billion. Agricultural business enterprises also receive special tax benefits, the three largest of which are each projected to cost $500 million to $600 million in 1984.

TABLE 6. SECTOR-SPECIFIC INDUSTRIAL SUPPORT: MANUFACTURING (In billions of current dollars)

	1984	1985	1986	1987	1988
			Expenditures		
Direct Expenditures	1.7	1.8	1.9	2.0	2.2
Credit Expenditures a/	1.0	0.7	0.3	0.2	0.3
			Credit		
Direct Loan Obligations	2.3	3.4	3.4	3.4	3.4
Loan Guarantee Commitments	8.4	9.2	9.2	9.2	9.2
			Sector-Specific Tax Expenditures		
Tax Credit for Corporations Receiving Income from Doing Business in U.S. Possessions	1.1	1.1	1.2	1.4	1.5

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Credit program expenditures are the cost of providing loans and loan guarantees, measured by net program outlays.

Trades and Services

The industrial support of trades and services is accomplished largely through general tax benefits, although there are several large credit programs. The Small Business Administration (SBA), the Economic Development Administration (EDA), and the Urban Development Action Grant (UDAG) economic development programs account for most of the direct or

TABLE 7. SECTOR-SPECIFIC INDUSTRIAL SUPPORT: AGRICULTURE (In billions of current dollars)

	1984	1985	1986	1987	1988
			Expenditures		
Direct Expenditures	7.7	9.0	9.7	10.2	10.7
Credit Expenditures a/	3.0	2.5	2.6	2.5	2.4
			Credit		
Direct Loan Obligations	12.1	11.6	12.0	13.0	13.1
Loan Guarantee Commitments	4.7	4.8	4.8	4.8	4.8
			Sector-Specific Tax Expenditures		
Expensing of Certain Capital Outlays	0.6	0.6	0.6	0.6	0.7
Capital Gains Treatment of Certain Income	0.5	0.5	0.6	0.6	0.6
Deductibility of Patronage Dividends and Certain Other Items of Cooperatives	0.6	0.6	0.6	0.6	0.7
Exclusion of Certain Cost-Sharing Payments	--	--	--	--	-- b/

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Credit program expenditures are the cost of providing loans and loan guarantees, measured by net program outlays.

b. Less than $50 million.

credit aid this sector receives. Direct and credit programs are projected to spend $500 million and $600 million on this sector in 1984, respectively (see Table 8).

Mining

As shown in Table 9, tax benefits are the largest component of industrial support for mining. The two largest sector-specific tax benefits are the depletion allowances (discussed in Chapter III), which are projected to cost the government $2.4 billion in 1984, and the expensing of certain capital expenses associated with mining (also discussed in Chapter III), which is projected to cost $1.2 billion in 1984. In contrast, direct programs are projected to cost only $600 million in 1984. 1/

Finance, Insurance, and Real Estate

The financial sector is projected to receive federal aid almost entirely through tax benefits (see Table 10). The industry receives a share of untargeted tax benefits, such as ACRS and ITC (discussed later in this chapter). In addition, there are special provisions directed at these industries, one example being accelerated depreciation for buildings, which is projected to cost the government $1.2 billion in 1984. The other major sector-specific tax benefit is the treatment of excess bad debt reserves, which is projected to cost the government $600 million in lost revenues. The Government National Mortgage Association (GNMA) guarantees of mortgage-backed securities are of aid to the industry, although they represent no new contingent liability to the government and the fees charged for GNMA guarantees cover GNMA administrative costs.

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1. If the windfall profit tax were included, the industrial support of the mining sector would be negative. However, excise taxes have not generally been included, because the theory of the interaction between excise taxes and tax expenditures is incompletely developed. While the Congress passed the Windfall Profit Tax with the intent of preventing a windfall transfer of income and not of penalizing the industry, it should be recognized that, due to the conditions of the world oil market, the burden of the windfall profit tax has been almost entirely borne by the oil industry.

TABLE 8. SECTOR-SPECIFIC INDUSTRIAL SUPPORT: TRADES AND SERVICES (In billions of current dollars)

	1984	1985	1986	1987	1988
			Expenditures		
Direct Expenditures	0.5	0.5	0.5	0.5	0.4
Credit Expenditures a/	0.6	0.6	0.6	0.6	0.7
			Credit		
Direct Loan Obligations	1.4	1.3	1.3	1.3	1.3
Loan Guarantee Commitments	2.3	2.3	2.3	2.3	2.3

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Credit program expenditures are the cost of providing loans and loan guarantees, measured by net program outlays.

Utilities and Sanitary Services

Most of the targeted aid to the utilities sector comes through Rural Electrification Administration credit programs, which are projected to have $3.7 billion in net outlays in 1984. The utility portion of energy research and development is projected to provide an additional $1.2 billion in aid. Sector-specific tax benefits are not large--the largest of these totals $400 million in 1984 and will be decreasing in the outyears (see Table 11). (Utilities are projected to receive considerable untargeted tax benefits, which are discussed below.)

TABLE 9. SECTOR-SPECIFIC INDUSTRIAL SUPPORT: MINING (In billions of current dollars)

	1984	1985	1986	1987	1988
			Expenditures		
Direct Expenditures	0.6	0.6	0.6	0.7	0.7
Credit Expenditures a/	--	--	--	--	-- b/
			Credit		
Direct Loan Obligations	--	--	--	--	-- b/
Loan Guarantee Commitments	0.1	0.1	0.1	0.1	0.1
			Sector-Specific Tax Expenditures		
Expensing of Exploration and Development Costs: Fuels	1.2	1.4	1.6	1.8	1.9
Excess of Percentage Over Cost Depletion: Fuels	2.1	2.1	2.3	2.4	2.6
Capital Gains Treatment of Royalties from Coal	0.2	0.2	0.2	0.2	0.3
Expensing of Exploration and Development Costs: Nonfuel	0.1	0.1	0.1	0.1	0.1
Excess of Percentage Over Cost Depletion: Nonfuel	0.3	0.3	0.4	0.4	0.4
Capital Gains Treatment of Iron Ore	--	--	--	--	-- b/

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Credit program expenditures are the cost of providing loans and loan guarantees, measured by net program outlays.

b. Less than $50 million.

TABLE 10. SECTOR-SPECIFIC INDUSTRIAL SUPPORT: FINANCE, INSURANCE, AND REAL ESTATE
(In billions of current dollars)

	1984	1985	1986	1987	1988	
			Expenditures			
Direct Expenditures	0.1	0.1	0.1	0.1	0.1	
Credit Expenditures a/	--	--	--	--	--	b/
			Credit			
Direct Loan Obligations	0.1	0.1	0.1	0.1	0.1	
Loan Guarantee Commitments	--	--	--	--	--	b/
Secondary Loan Guarantees	71.5	74.9	78.1	81.3	84.4	
			Sector-Specific Tax Expenditures			
Excess Bad Debt Reserves of Financial Institutions	0.6	0.8	0.9	1.1	1.0	
Exemption of Credit Union Income	0.2	0.2	0.2	0.2	0.3	
Depreciation on Income-Producing Buildings in Excess of Straight-Line	1.2	1.3	1.4	1.5	1.6	
Five-Year Amortization for Housing Rehabilitation	0.1	0.1	0.1	0.1	0.1	
Investment Credit for Rehabilitation of Structures Other Than Historic Structures	0.4	0.4	0.4	0.4	0.4	

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Credit program expenditures are the cost of providing loans and loan guarantees, measured by net program outlays.
b. Less than $50 million.

TABLE 11. SECTOR-SPECIFIC INDUSTRIAL SUPPORT: UTILITIES AND SANITARY SERVICES
(In billions of current dollars)

	1984	1985	1986	1987	1988
Expenditures					
Direct Expenditures	1.3	1.3	1.4	1.5	1.6
Credit Expenditures a/	3.7	3.7	3.7	3.7	3.7
Credit					
Direct Loan Obligations	4.2	4.3	4.3	4.4	4.6
Loan Guarantee Commitments	--	--	--	--	-- b/
Sector-Specific Tax Expenditures					
Exclusion of Payments in Aid of Construction of Water, Sewage, Gas, and Electric Utilities	0.1	0.1	0.1	0.1	0.1
Reinvestment of Dividends in Stock of Public Utilities	0.4	0.4	0.2	-- c/	-- c/

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Credit program expenditures are the cost of providing loans and loan guarantees, measured by net program outlays.

b. Less than $50 million.

c. Discontinued after 1986.

Communications

Most federal costs on behalf of the communications sector are incurred through the tax system. None of these tax expenditures is sector-specific. The only credit program designed to benefit the communications industry is the Rural Electrification and Telephone Revolving Fund, which is projected to provide approximately $300 million in loans and guarantees per year throughout this period (see Table 12).

Transportation

The largest direct-expenditure programs are those for air transportation research and development and for maritime subsidies. Combined, these programs will spend $800 million in 1984 and nearly $1 billion by 1988. Credit programs provide $900 million in loans and guarantees to transportation in 1984, but a drop in loan guarantees for ship financing leaves the total closer to $700 million for the remainder of the period (see Table 13). Sector-specific tax benefits are all small.

Construction and Other

Less than $100 million per year received by this sector is in the form of direct expenditures. A sector-specific provision allowing capital gains treatment of certain timber income accounts for more than $500 million. Credit programs, primarily the activities of the Export-Import Bank, provide $1.4 billion in loan guarantees and $400 million in loans annually in support of the construction sector (see Table 14). The cost of such programs is less than $200 million.

TARGETED SUPPORT IN ITS INDUSTRIAL CONTEXT

Providing simple dollar figures for sector aid without examining the industrial context in which this support takes place is of limited value. To make these aggregate numbers more meaningful, they must be compared to some measure of sector size. The report uses two measures of the extent of federal support. The first is direct federal expenditures as a percent of

TABLE 12. SECTOR-SPECIFIC INDUSTRIAL SUPPORT: COMMUNICATIONS (In billions of current dollars)

	1984	1985	1986	1987	1988
			Expenditures		
Direct Expenditures	0.1	0.1	0.1	0.1	0.1
Credit Expenditures a/	--	--	--	--	--
			Credit		
Direct Loan Obligations	0.3	0.3	0.3	0.3	0.3
Loan Guarantee Commitments	--	--	--	--	-- b/

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Credit program expenditures are the cost of providing loans and loan guarantees, measured by net program outlays.

b. Less than $50 million.

29-559 O - 84 - 5

TABLE 13. SECTOR-SPECIFIC INDUSTRIAL SUPPORT: TRANSPORTATION (In billions of current dollars)

	1984	1985	1986	1987	1988
Expenditures					
Direct Expenditures	1.1	0.9	1.0	1.0	1.1
Credit Expenditures a/	--	--	--	--	-- b/
Credit					
Direct Loan Obligations	0.1	0.2	0.2	0.2	0.2
Loan Guarantee Commitments	0.8	0.5	0.5	0.5	0.6
Sector-Specific Tax Expenditures					
Energy Credit for Intercity Buses	--	--	--	--	-- b/
Amortization of Motor Carrier Operating Rights	0.1	0.1	-- b/	-- b/	-- b/
Deferral of Tax on Shipping Companies	--	--	--	--	-- b/

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Credit program expenditures are the cost of providing loans and loan guarantees, measured by net program outlays.

b. Less than $50 million.

TABLE 14. SECTOR-SPECIFIC INDUSTRIAL SUPPORT: CONSTRUCTION AND OTHER (In billions of current dollars)

	1984	1985	1986	1987	1988
Expenditures					
Direct Expenditures	--	--	--	--	-- a/
Credit Expenditures b/	0.2	0.1	0.1	0.1	0.1
Credit					
Direct Loan Obligations	0.4	0.6	0.6	0.6	0.6
Loan Guarantee Commitments	1.4	1.5	1.5	1.5	1.5
Sector-Specific Tax Expenditures					
Capital Gains Treatment of Certain Timber Income	0.5	0.6	0.7	0.8	0.8
Investment Credit and Seven-Year Amortization for Reforestation Expenditures	--	--	--	--	-- a/

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Less than $50 million.

b. Credit program expenditures are the cost of providing loans and loan guarantees, measured by net program outlays.

the projected value added to the economy by each sector in 1984. 2/ The second measure is 1984 credit program net outlays as a percent of sector value added.

These numbers should be considered illustrative of the level of support: not the level of subsidy. The net credit outlays are an especially crude measure of federal support, as discussed in Chapter II, especially since they are not related to the value of the subsidy to the firm or to its impact on the allocation of economic resources.

This comparison does not attempt to judge the relative importance of federal aid to any industry. The relative importance is very difficult to determine. The federal government may currently play a large role in a given industry, but the industry would be dependent on this aid only if no other actor was willing to provide the same financial capital as the federal government. Such an analysis for each industry would carry this report further than its limited mission allows: it would be the first step in determining if federal aid in a given instance is appropriate. If the federal government is merely preempting private actors, then aid may well not be important to an industry.

Direct Support

In terms of direct support, some sectors clearly receive more aid than others. Agriculture receives direct support equal to 8.3 percent of its estimated value added, while other sectors receive much less relative to their size (see Table 15). Utilities, which ranks second, receives an amount equal to 1.5 percent of value added. Manufacturing, which ranks fifth, receives 0.2 percent. At the bottom end of the spectrum, trades and services receive little from the federal government.

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2. Value added attempts to measure the economic activity originating in an industry or sector. For this reason, value added equals the gross industry output, minus purchased inputs and declines in inventory or work in progress. Projections of nominal GNP in August 1983 were used in making these measurements. Then each sector's share of GNP was calculated using the last five years' average share of GNP as a weight. However, the share of GNP originating in each sector may be slightly different in the future than it was in the past. To the extent that these relationships turn out differently than assumed, the estimates presented in Table 6 may differ from the actual ratios. However, it should be pointed out that the relative shares of GNP by sector vary only slightly in the short run in response to the business cycle.

TABLE 15. THE INDUSTRIAL CONTEXT: SECTOR-SPECIFIC BENEFIT

Sector	Direct Expenditures (percent of sector value added) a/	Credit Expenditures (percent of sector value added) b/
Manufacturing	0.2	0.1
Agriculture	8.3	3.2
Trades and Services	c/	c/
Mining	0.6	c/
Finance, Insurance, and Real Estate	c/	c/
Utilities and Sanitary Services	1.5	4.2
Communications	0.1	c/
Transportation	0.9	c/
Construction and Other	0.0	0.1

SOURCE: Congressional Budget Office.

a. 1984 direct expenditure program outlays as a percent of projected 1984 sector value added.

b. 1984 credit program net outlays as a percent of 1981 sector value added.

c. Less than 0.05 percent.

Credit Program Net Outlays

Assistance in the form of credit is very unevenly distributed. Federal support programs provide the equivalent of 4.2 percent of value added in the utilities sector. Agriculture, at 3.2 percent, is second. Manufacturing, once again in the middle of the range, receives an amount equal to roughly 0.1 percent of its value added. At the low end of the scale, mining and transportation receive almost no credit support (see Table 15).

29-559 O - 84 - 6

Targeted Tax Expenditures

By this measure, federal aid is again distributed unevenly among sectors. The mining sector is the most heavily supported through tax measures specifically designed to reduce its taxes, receiving more than twice as much as the next largest recipient in percentage of its value added. Agriculture, though a distant second, also received a large share relative to size. Manufacturing received very little, as did most other sectors. No exact estimates of these tax expenditures are presented here, because of the difficulties in adding them. The discussion seeks to give a sense of magnitude.

MULTISECTOR TAX EXPENDITURES BY SECTOR

The previous sections presented a sector-by-sector breakdown of targeted aid, including direct expenditures, credit, and sector-specific tax expenditures. This section attempts to allocate among sectors the multisector tax expenditures presented in Chapter III. These revenue-loss estimates are surrounded by a band of uncertainty that carries through into subsequent calculations. Hence, the industry allocation presented below should be thought of as illustrative of the order of magnitude of such benefits, and not as a definitive accounting.

Major Allocation Assumptions

The nine industrial sectors were defined according to the criteria of the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce. The categories are presented in Table 16. Each sector is made up of many industries, which do not share federal support evenly. Thus statements about a sector may not hold for a firm or an industry within it.

A problem with some of the BEA data is that their classification is performed on a firm, rather than establishment, basis. Thus, integrated oil firms are classified as manufacturing firms, because refining is classified as a manufacturing activity. Their oil and gas exploration and production activities, while more properly in the mining sector, are attributed to manufacturing. Where possible, the analysis has attempted to correct for this limitation of the BEA classifications.

While most credit and direct spending programs keep accurate records of the industries that benefit from federal support, this is not the case for most tax expenditures. In order to allocate aggregate tax expenditures across industries, assumptions must be made about what types of firms are

TABLE 16. INVESTMENT TAX CREDIT BY INDUSTRIAL SECTOR
(In billions of doilars, by calendar years)

Sector	1978	1979	1980
Manufacturing	5.2	7.1	6.7
Agriculture	0.1	0.1	0.1
Trades and Services	1.6	1.9	2.0
Mining	0.2	0.2	0.4
Finance, Insurance, and Real Estate	0.7	0.8	0.7
Utilities and Sanitary Services	1.9	1.4	2.1
Communications	1.7	1.7	1.9
Transportation	1.2	0.9	1.0
Construction and Other	0.4	0.4	0.4
Total a/	12.9	14.6	15.1

SOURCE: Internal Revenue Service, Statistics of Income: Corporation Income Tax Returns, various years.

a. Totals may not add because of rounding.

likely to take advantage of a given provision and in what amount. The most important of the all-industry tax provisions are capital gains provisions and investment-related benefits such as the accelerated cost recovery system (ACRS) and the investment tax credit (ITC).

Capital Gains. No satisfactory assumption could be made about the division of capital gains by sector. Capital gains reported in one industry for tax purposes may have occurred in a different industry. For example, if a steel firm makes a profit by selling oil wells, its capital gain will be attributed to a firm in the manufacturing sector although the event occurred in the mining sector. This and numerous other difficulties led to the omission of capital gains from this allocation exercise. For similar reasons, the exercise omitted tax revenue losses associated with safe harbor leasing.

ACRS and ITC. Investment expenditures by sector were available, and were sector-specific. The simplifying assumption was therefore made that the ACRS tax expenditures would be distributed among sectors according to

their levels of investment. 3/ The tax expenditures attributed to ACRS are measured by evaluating the difference in tax liabilities between ACRS depreciation and economic depreciation. This assumption implies that the difference is the same for all investments. To the extent that this implication is not true, the assumption may introduce biases. The information on which to base a closer estimate is dated and might therefore introduce other biases. 1981 was used as the base year for dividing investment-related tax expenditures. To the extent that investment patterns change, this division may also introduce some bias. Specifically, the most obvious source of bias may be the decrease in investment in the mining sector, since 1981 was a peak year for oil and gas exploration. 4/ Since then, oil prices have fallen and exploration has declined.

Each industrial sector's share of the total ITC revenue loss was calculated using IRS data on ITC by industry. Every year the IRS publishes the amount of ITC claimed by each sector and industry in its Statistics of Income. 5/ The survey estimates for the last few years are presented in Table 16. Like the BEA estimates, however, these results are gathered on a firm, not establishment, basis. Consequently, an adjustment was made similar to that for ACRS benefits. ITC allocation in later years was then assumed to be similar to the 1980 allocation. To the extent that this pattern changes in the later years, these estimates will be biased. An additional bias is also introduced because the IRS data only include corporate returns. Corporations' use of the ITC is projected to cost $12.3 billion in 1984, while individuals' use of ITC is projected to cost $3.4 billion. To the extent that the individual ITC differs sectorally from the corporate, this division will be biased.

The loss attributable to reduced rates on the first $100,000 of net corporate income was allocated by assuming that each sector's share was

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3. For a different approach to this problem, see Jane Gravelle, Effects of Tax Depreciation Changes and Federal Deficits on the Allocation of Capital and Output: A Simulation Study (July 1, 1983) and Effective Corporate Tax Rates and Tax Changes in the 97th Congress (January 3, 1983), Congressional Research Service.

4. Intangible oil and gas drilling costs are expensed under current law and so are not eligible for ACRS or ITC. They were therefore not included in the calculations for this division by industry.

5. For the latest year, see Internal Revenue Service, Statistics of Income--1980: Corporation Income Tax Returns (1983).

proportional to its share of profitable corporations in the economy. Again, the IRS Statistics of Income data were used.

Manufacturing

The manufacturing sector receives a great deal more aid from multisector tax expenditures than from either credit programs or sector-specific tax benefits. Using the allocation criteria discussed above, the manufacturing sector receives $6.6 billion in ACRS benefits and $6.0 billion in ITC credits (see Table 17). It is also the recipient of the bulk of other tax benefits. Since manufacturing accounts for over 95 percent of industrial research and development, this analysis assigned it $2.4 billion of the $2.5 billion revenue lost due to the expensing of research and development expenses. (The remainder was assigned to utilities and business services.) [6] Similarly, the manufacturing sector was also assigned $1.1 billion of the tax losses resulting from DISC. The annual DISC reports suggested that virtually all the tax loss resulted from the operations of manufacturing firms. [7] (Agriculture accounted for a small fraction.)

Agriculture

The agricultural sector of the economy receives much less aid through multisector tax expenditures than through direct spending or credit programs. While direct program benefits total $7.7 billion in 1984, the largest tax benefit, ACRS, is projected at $1.0 billion. The relatively low level of investment-related tax benefits received by the agricultural sector results from the relatively small amount of investment in that sector: agriculture is simply not as capital-intensive as other sectors (see Table 17 for a full listing of tax benefits).

Trades and Services

In contrast to the agricultural sector, the trades and services sector receives much more support from multisector tax benefits than from targeted measures. Because the industry is composed of so many firms--close to half the profitable corporations in the economy are to be found in

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6. National Science Foundation, Research and Development in Industry, 1980 (1982).

7. Department of the Treasury, The Operation and Effect of the Domestic International Sales Corporation, Annual Report (various years).

TABLE 17. MULTISECTOR TAX EXPENDITURES: ILLUSTRATIVE ALLOCATION BY SECTOR, 1984
(In billions of current dollars)

Sector	Accelerated Cost Recovery System	Investment Tax Credit	Reduced Rate on First $100,000 of Corporate Income	Exclusion of Interest on State and Local IDBs	Expensing Certain R&D Expenditures	Interest Deferral on DISCs	Exclusion of Interest on State and Local Pollution Control Bonds
Manufacturing	6.6	6.0	0.7	2.0	2.4	1.1	0.7
Agriculture	1.0	0.1	0.2	a/	a/	0.1	a/
Trades and Services	3.0	2.0	3.5	1.5	a/	a/	a/
Mining	1.7	1.4	a/	a/	a/	a/	a/
Finance, Insurance and Real Estate	2.0	0.7	1.2	a/	a/	a/	a/
Utilities and Sanitary Services	1.0	2.1	a/	a/	a/	a/	0.8
Communications	1.7	1.9	a/	a/	a/	a/	a/
Transportation	0.7	1.0	0.2	a/	a/	a/	a/
Construction and Other	0.7	0.4	0.6	a/	a/	a/	a/
Total b/	18.3	15.7	6.5	3.5	2.5	1.2	1.5

SOURCE: The Congressional Budget Office and the Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

NOTE: Safe harbor and capital gains tax revenue losses not attributed by industry.

a. Less than $50 million.
b. Totals may not add because of rounding.

the trades and services sector--the largest benefit comes through the reduced rate on the first $100,000 of corporate income: $3.5 billion in 1984. Similarly, because it is so large, much of the nation's investment occurs in this sector for this reason, the sector is projected to receive $3.0 billion worth of ACRS benefits and $2.0 billion worth of ITC benefits. Many firms benefiting from industry development bonds are in this sector. The sector's share of the tax loss from industrial development bonds (IDBs) is projected to be $1.5 billion in 1984, assuming that the loss is proportional to the value of the IDBs issued (see Table 17).

Mining

The mining sector receives significant benefits through multisector tax expenditures, although it may receive somewhat more through targeted programs and tax expenditures. Despite the fact that many of its investments are not eligible for ITC or ACRS benefits (the intangible drilling costs are expensed), the mining sector receives $1.7 billion in ACRS benefits and $1.4 billion in ITC benefits (see Table 17).

Finance, Insurance, and Real Estate

The finance, insurance, and real estate sector receives much more from the multisector tax expenditures than it does from direct expenditures or targeted tax expenditures. Its ACRS and ITC benefits are projected at $2.0 billion and $700 million, respectively. The two benefits are not proportional because buildings are not eligible for ITC and much of the investment in this sector is for structures. Like trades and services, this sector has many firms. Consequently, the reduction in corporate tax rates for the first $100,000 in income is of significant benefit to the sector: the tax revenue loss is projected to be $1.2 billion (see Table 17).

Utilities and Sanitary Services

Although the utilities and sanitary services sector benefits more from direct and credit programs than it does from multisector tax expenditures, the latter are not insubstantial. The sector is projected to receive $1.0 billion in ACRS benefits and $2.1 billion in ITC benefits. Because utilities' structures are specialized, investment in them is eligible for ITC so that the sector receives a larger than expected share of ITC benefits. The utilities sector is also projected to benefit from pollution control bonds, their share of the revenue loss being $800 million in 1984 (see Table 17).

Communications

Virtually all the aid received by the communications sector comes through the multisector tax expenditures; both direct expenditures and credit programs are very small. The ACRS and ITC benefits it is projected to receive are $1.7 billion and $1.9 billion, respectively. Like the utilities sector, many of the structures in the communications sector are specialized, and investment in them therefore receives ITC benefits that are usually denied structures. Thus, this sector's ITC share is larger than its level of investment would suggest (see Table 17).

Transportation

Like others, the transportation sector receives more multisector tax expenditures than sector-specific benefits. Direct support totals $1.1 billion, while ITC benefits alone for this sector total $1.0 billion. In addition, the ACRS benefits are projected to total $700 million and the tax loss due to reduced corporate rates on the first $100,000 is projected to reach $200 million (see Table 17).

Construction and Other

The majority of the aid this sector receives comes from multisector tax expenditures; the only large sector-specific benefit is the capital gains treatment of certain timber income, which is projected to cost the Treasury $500 million in 1984. In contrast, the ACRS revenue loss alone is projected at $700 million for the same year. ITC benefits are projected at another $400 million, while the benefits from reduced rates are projected at $600 million (see Table 17).

The Industrial Context of Multisector Tax Benefits

Because the multisector tax benefits, even without capital gains, are dominated by investment-related tax benefits, these benefits accrue mainly to capital-intensive sectors. Manufacturing, utilities, mining, and communications all receive larger shares of such benefits than their contribution to the economy would suggest. Conversely, the less capital-intensive sectors, specifically trades and services, and finance, insurance and real estate, receive much less of such benefits than the contribution to net output would suggest. This section discusses the distribution of multisector tax benefits. However, because of the adding-up problems with tax benefits, discussed in Chapter II, which are particularly severe for these provisions, and the

imprecision with which one can allocate the benefits among industries, this section must by its very nature be less quantitative than was the sector-specific discussion earlier in this chapter. Its comparisons are in terms of magnitude rather than precise estimates.

Manufacturing receives by far the largest share of the multisector benefits relative to its contribution to aggregate output. On average, manufacturing accounts for between one-fifth and one-quarter of gross output, yet receives almost one-half of the benefits conferred by these tax supports. The utilities sector receives even more disproportionate benefits relative to its size: while it accounts for only about 2 percent of aggregate output, it receives a significant share of the multisector benefits. The communications sector exhibits a similar pattern. Mining's share of these benefits is roughly twice its share of aggregate output.

The trades and services sector, on the other hand, receives much less of these benefits than its share of aggregate output would suggest. While this sector produces almost one-third of aggregate output, it receives only one-fifth of such benefits. Similarly, the financial sector is under-represented as its share of output is much larger than its share of these benefits.

EFFECTIVE TAX RATES

Another way of analyzing the effect of the tax expenditures on the recipient sectors is to observe their effective tax rates and see how they vary both from the statutory rate and from each other. In this section, effective corporate tax rates are analyzed in various ways to see how industries benefit.

This approach differs from that of the previous sections in several ways. The effective rate looks at industrial support from the point of view of the recipient, not the budget: it tells what something is worth to the industry, not necessarily what it cost the government. Since this report is concerned with budget analysis, the change in method also represents a change in focus. Second, such an analysis, by its very nature, excludes tax reductions enjoyed by individuals. Most capital gains benefits, which total $16.4 billion in 1984, accrue to individuals. Similarly, this measure does not include sole proprietorships and unincorporated family businesses, most notably farms. By its very nature, therefore, it is biased and its bias is uneven by sector. Nevertheless, outside of a few sectors, the bulk of output is produced by corporations.

The average corporate tax rate for 1982 was 36.5 percent of economic profits, while the top statutory rate was 46.0 percent. The average had decreased from 1981 when it was 42.6 percent. The result of the 1982 average rate was that corporate collections were roughly 25 percent less than the statutory rate would suggest. 8/

Economic profits are not published on a sector-by-sector basis, but book profits are. Book profits overstate the true effective rate because they include the benefits of ACRS and some other provisions in their profit base. The average tax rate on corporate book profits is 32.1 percent. This figure also includes state and local taxes. In the discussion that follows the overstatement should be kept in mind: since ACRS benefits do not accrue evenly by industry, the overstatement should not be assumed to be constant for all sectors. 9/

The effective 1982 tax rate on corporate book profits varied significantly from sector to sector. Manufacturing's tax rate was equal to the average, 39 percent. The only sector with a higher effective tax rate was the financial sector, which had a rate of 47.6 percent. (This estimate does not include the Federal Reserve Banks. The 1982 and 1981 tax rates for the financial sector without the Federal Reserve Banks, which have a tax rate close to 100 percent, were 82 percent.) Trades and services' tax rate was the third highest at 33 percent. At the other end, the transportation sector had an effective rate of minus 1105 percent. 10/ (This rate is unusual, since the transportation sector usually pays taxes at a much higher rate. Its 1981 rate, for instance, was 35 percent. Between 1979 and 1981, its rate averaged 41 percent.) Agriculture also had a negative rate: minus 66 percent. (As with transportation, this was unusual. The 1981 rate for agriculture was 58 percent; for 1980, 70 percent.) Other sectors' tax rates are given in Table 18.

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8. Council of Economic Advisers, Economic Report of the President (February 1983), p. 257. Economic profits are corporate book profits adjusted for inventory profits, which do not come from real output, and tax depreciation, which does not necessarily match economic depreciation.

9. Bureau of Economic Analysis, Survey of Current Business (July 1983), p. 77.

10. The sector's profits for 1982 were $43 million while its tax liabilities were a negative $475 million and thus its after-tax profits were larger than its pre-tax profits. Tax liabilities may be negative if benefits are carried back to previous profitable years. Carrybacks are explained more fully in the next chapter.

Table 18 also presents other estimates of effective tax rates. The Joint Committee on Taxation (JCT) surveyed 213 large corporations and grouped them by sector. Its results are shown in the fourth row in Table 18. The last two rows are projections of future effective tax rates on new investment, made by Jane Gravelle and Alan Auerbach, respectively. The results are not strictly comparable, but they serve to show the unevenness of the tax burden.

Even with the qualifications noted, several patterns seem to emerge. First, the effective tax rate is significantly lower than the statutory rate. The JCT study of large corporations discovered that the effective rate paid by these corporations was roughly one-third the statutory rate. Jane Gravelle's forecast of future rates predicts a rate slightly higher than half the statutory rate. Even the rates that include state and local taxes are below the statutory rate. Excluding state and local taxes would make them even lower.

The estimates all show wide variability in taxes paid, and indicate that the communications industry pays below-average taxes while the manufacturing sector pays average or above-average taxes. Beyond this, there seems to be little detailed agreement among the different approaches.

TABLE 18. EFFECTIVE TAX RATES (In percent)

Effective Tax Rates	Manufacturing	Agriculture	Trades and Services	Mining	Finance, Insurance, and Real Estate
Average Tax Rates on Corporate Book Profits a/					
1980	43	70 b/	30	29	48
1981	39	58 b/	32	32	NA
1982	39	-66 b/	26	26	NA
Joint Committee on Taxation					
1982	22	NA	24	18	3
Jane Gravelle	29	25	30	16	NA
Alan Auerbach	25	17	23	25	37

SOURCES: Congressional Budget Office; Bureau of Economic Analysis, Survey of Current Business (July 1983), p. 77; Joint Committee on Taxation, Study of 1982 Effective Tax Rates of Selected Large U.S. Corporations (November 1983); Jane Gravelle, Effective Corporate Tax Rates and Tax Changes in the 97th Congress, Congressional Research Service (January 3, 1983); and Alan Auerbach, "Corporate Taxation in the U.S."(unpublished, October 1983).

(Continued)

TABLE 18. EFFECTIVE TAX RATES (Continued)

Effective Tax Rates	Utilities and Sanitary Services	Communi-cations	Transpor-tation	Con-struction	Average
Average Tax Rates on Corporate Book Profits a/					
1980	27	25	50	2 b/	38
1981	21	22	35	47 b/	36
1982	8	13	-1105	25 b/	32
Joint Committee on Taxation					
1982	16	2	17	16	16
Jane Gravelle	25	18	19	13	25
Alan Auerbach	28	23	15	14	NA

NA = Not available.

a. Average tax rates on corporate book profits, including federal, state, and local corporate profits tax, calculated from Bureau of Economic Analysis data.

b. In the rest of the paper, agricultural services, forestry, and fisheries are attributed to the construction and other sectors. Here they are attributed to the agricultural sector. The data do not permit their separation.

CHAPTER V. INTERACTION WITH OTHER FEDERAL POLICIES

Federal support programs do not stand in isolation. They are tied to other federal policies for industries and for the economy as a whole. This chapter assesses the relationship between industrial support policies and other federal policies. First, the interactions between industrial support policies and short-run economic stabilization policies are discussed. The chapter then focuses on selected areas to illustrate some of the ways in which industrial support programs help or hinder other federal endeavors.

SHORT-RUN ECONOMIC STABILIZATION AND INDUSTRIAL SUPPORT

Policies for stabilizing the economy will interact with industrial support, but the interaction will not be the same in every industry. This is because of the different mix of aid programs enjoyed by each industry, and because the value of each type of support varies over the business cycle. Nevertheless, some generalizations are possible. Except for some credit programs in agriculture and utilities, the bulk of industrial support is procyclical--that is, federal aid rises when the economy is on the upswing and falls during a downswing. Tax expenditures are procyclical, despite attempts to lessen variation, because they are most effective when profits and investment are high. Credit programs, except in agriculture, tend to be oversubscribed and hence have no excess capacity to draw upon during economic downturns. The cost of credit programs often varies countercyclically, however; while the amount of federal credit used may rise during an upswing, the number of people receiving it does not.

This discussion of the interaction between industrial support and economic stabilization policies does not necessarily imply any intent of the Congress. Interactions may help or frustrate Congressional intent, depending on the program.

Tax Expenditures and Economic Stabilization

Tax expenditures vary in their value to firms over the business cycle. During a recession, when profits and hence tax liabilities are low, firms are less likely to be able to use tax benefits. Conversely, during an upswing, when profits and tax liabilities are high, the value of a deduction increases.

Thus, tax expenditures would be inherently procyclical without some means of distributing the benefits over time.

Carrybacks and carryovers modify this procyclicality. If allowable deductions are larger than can be used in any one year, they can be applied to past or future tax years. A net operating loss can be carried back 3 years and forward 15 years. For example, if a firm has a profitable year in which it paid taxes, followed by an unprofitable year when it cannot use all of its allowable deductions, it can apply some of the unused deductions to its previous year's income. When three past years' income have been entirely offset by these carrybacks, the firm can count the excess deductions against future years' income. These carryovers to the future are not of immediate benefit to the firm, however, since they confer little benefit until the next profitable tax year. Such unused tax benefits are significant in amount. In 1980, the latest year for which detailed tax data are available, unused investment tax credits (ITCs) alone amounted to approximately $12.2 billion.

In 1981, the Congress liberalized the terms under which firms with specific unused tax benefits could sell them to other firms--the so-called safe harbor leasing arrangements. Like carrybacks, this provision reduced the cyclical variation in tax benefits to the firm, but it also raised questions of equity in the tax system and was widely viewed as enabling corporations to avoid paying any income tax at all. Subsequently, the Tax Equity and Fiscal Responsibility Act of 1982 tightened the leasing provisions and made them much less available. More recently, there have been suggestions that corporations with excess credits be allowed to lend them at low rates if they use the cash flow for new investment, so that a firm experiencing a loss would receive the tax benefits it was entitled to if it had been making a profit. Such a measure would decrease the procyclicality of these tax expenditures, although it might be costly and hard to administer.

Credit Programs and Economic Stabilization

Credit programs vary in their cyclical sensitivity. The agricultural credit programs are countercyclical by design. The Commodity Credit Corporation (CCC) programs help agricultural enterprises maintain income during periods of low farm prices, although these do not necessarily coincide with aggregate economic downturns.

The cyclical sensitivity of other credit programs depends on the design of a specific program. Programs with fixed maximum interest rates tend to be procyclical, becoming relatively more attractive during periods of high interest rates, which tend to precede recessions, and less attractive during recessions when commercial interest rates tend to fall. An example is the

Rural Electrification Administration (REA) direct loans program, which allows cooperatives to borrow from the REA at a maximum rate of 5 percent. Programs that enable participants to borrow at Treasury borrowing rates have no clear cyclical property, since the differential between commercial rates and government rates shows no strong cyclical variability.

Many loan guarantees are countercyclical since they increase the supply of loans during recessions, when the increased probability of default causes lenders to become more wary of making loans. This relationship is less apparent in the case of the largest single federal loan guarantee program, the Government National Mortgage Association (GNMA), which guarantees federally-insured mortgaged-backed securities issued by private lenders and backed by federally-insured and guaranteed mortgages. Given the federal primary guarantee, the federal secondary guarantee does little to reduce risk further. Nevertheless, this program eliminates some of the amplitude in housing market fluctuations to the extent that it links mortgage markets to national credit markets. But the mortgage markets and national credit markets are becoming increasingly connected independently of GNMA, and hence its role in mitigating fluctuations in the housing industry may no longer be as important. The relationship between GNMA and the business cycle depends upon the extent to which GNMA's role in linking the mortgage and credit markets is held to be unique.

The relationship of federal credit programs to the business cycle is also affected by other factors. One is the willingness of agencies such as the Small Business Administration to continue lending when other actors will not, thus helping to stabilize the market. But because the funds available through such agencies are limited, many federal credit programs are oversubscribed in all but the most severe economic downturns and cannot, without additional appropriations, increase their lending to compensate as other lenders drop out of the market. The second factor affecting the cyclical behavior of these programs is the willingness of the Congress to increase the size of their appropriations during economic downturns. Such Congressional actions can, depending on their timing and on the ability of the credit program to increase the flow of funds to its client base, be either procyclical or countercyclical.

INDUSTRIAL SUPPORT AND INTERNATIONAL TRADE

A major concern of the Congress when formulating business financial aid programs is to promote exports and assist U.S. firms in meeting international competition. These concerns have been expressed directly in such programs as the Export-Import Bank or the Domestic International Sales Corporations (DISCs), and indirectly in other measures such as

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accelerated depreciation or research tax credits. The Congress uses all three channels of aid--credit, direct assistance and tax expenditures--to support U.S. firms internationally. 1/

The three sectors of the U.S. economy most exposed to international competition are manufacturing, agriculture, and transportation. While the United States imports petroleum and other minerals, these are not felt to compete with domestic activity. 2/ This section focuses on the three above-mentioned industrial sectors.

Manufacturing

The Congress has tried to improve the trading position of the manufacturing sector in several ways: through investment incentives, low-cost export credits, and tax benefits for exporters. The effectiveness of these programs is impossible to estimate, since many factors enter into international trade decisions: other nations can institute countervailing subsidies, or the effects of export subsidies can be swamped by exchange-rate fluctuations.

Untargeted Benefits. The most important multisector programs affecting international trade are the investment-related tax subsidies such as ACRS, ITC, and safe harbor leasing. One of the purposes of this

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1. Any discussion limited to financial support of business in international trade necessarily ignores other important components of federal support--non-financial aid and rules of conduct--that also play a large part in such trade. Tariffs and orderly marketing agreements are familiar examples of non-financial aid to industry that affect international trade. Export controls on high-technology goods are an example of rules of conduct that affect international trade.

2. A significant portion of non-manufacturing trade occurs because of the difference in natural resource endowments. Since 1974, oil and oil products have accounted for 20 to 25 percent of total imports; increased investment can reduce this somewhat, but domestic oil reserves are limited. Similarly, agricultural commodities have accounted for 15 to 20 percent of U.S. exports in the last few years. In the case of agriculture, the situation is more complex. Without the natural endowment, in this case the Great Plains, the United States could not be a major agricultural exporting nation. But the role of federal agricultural policy in raising investment and productivity cannot be denied.

legislative is to increase the competitiveness of U.S. industry. Investment incentives should prove more useful to capital-intensive industries, such as automobiles and steel, than to labor-intensive industries such as semiconductors. (See the discussion of the relative impact of this aid in the final section of this chapter.) There are, however, several limits on the degree to which investment tax benefits can be expected to improve the U.S. balance of trade.

In many manufacturing industries, the cost of capital is not the crucial factor in giving non-U.S. firms an edge over U.S. firms. Japanese automobile makers have a $1,000 to $2,000 per car advantage in higher productivity and lower wages. Unless the added investment stimulated by investment tax benefits lowered the costs of U.S. automobile makers by this amount, the Japanese would retain an advantage. Thus, while the tax benefit in this industry could make some difference, the added competitiveness is not likely to be large. 3/

In the U.S. steel industry, the costs of capital represent between 15 and 33 percent of the cost of a ton of steel. 4/ Thus a small differential in the cost of capital could make some small difference in the cost of steel. But, the effects of the investment tax benefits may be swamped by changes in capacity utilization rates, which vary significantly over the business cycle, as well as by swings in exchange rates.

In general, in order to stimulate exports or reduce imports by a large amount, investment incentives would have to lower capital costs of U.S. firms substantially. Since, as noted above, the cost of capital is often not critical, the incentives must raise productivity sufficiently to overcome cost disadvantages from other inputs.

In addition, tax expenditure programs are not likely to be of great benefit to firms exposed to severe international competition. To the extent that their profits have suffered, they will not find much advantage in tax benefits. The benefits will be most useful to firms that are not affected by international competition or are in a commanding international position.

Export Promotion. The Export-Import Bank (Eximbank) provides support through subsidized credit. Manufacturing and construction exports

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3. Congressional Budget Office, The Fair Practices in Automotive Products Act: An Economic Assessment (1983).

4. Donald Barnett and Louis Schorsch, Steel: Upheaval in a Basic Industry (Ballinger Books, 1983).

receive an estimated 95 percent of the benefit derived from the Eximbank's $2.5 billion in direct loans and $9.0 billion in loan guarantees. These credit programs were set up to help stabilize the U.S. position in international trade. Many experts have argued that Eximbank loans merely duplicate credit activity that would otherwise take place in private capital markets.

The Congress established the Domestic International Sales Corporation (DISC) program in 1971 to encourage exports. A company that establishes a DISC as a conduit for export sales is allowed to defer, almost indefinitely, taxes owed on the profits of the export sales. In 1984, the tax benefits associated with DISCs are estimated at $1.2 billion in lost revenue. The Congress intended this as an offset to existing tax incentives--both domestic and foreign--that encourage U.S. companies selling products abroad to establish overseas manufacturing facilities. In the first years after the establishment of the DISC program, exports receiving this treatment rose, but at least some of the increase appears to have been at the expense of non-DISC exports. 5/

Agriculture

In the agricultural sector, financial assistance has had uneven cyclical effects. While the relatively high level of commodity price supports currently dampens U.S. grain exports, the support price has not always been above the world price. Moreover, other export promotion programs have had a positive effect on agricultural exports.

Commodity Price Supports. The relationship between the support price and the world price has changed over the last decade. In the commodities revolution of the early 1970s, the world price for agricultural products was significantly higher than the support price. The support price increased as world prices increased, encouraging investment and expanded production. By the 1980s, however, the international demand for agricultural commodities had peaked and supply surpassed consumption. The traditional relationship between support prices and world prices was reversed. This reversal was exacerbated by the rapid rise in the value of the dollar, which dramatically increased the exchange-rate-adjusted support price. The current level of federal support for agriculture thus discourages exports (and may encourage import substitution by buyer nations, which

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5. DISCs have been found in violation of the General Agreement on Tariffs and Trade (GATT), and the program is being redesigned to conform to the GATT while continuing to provide similar tax benefits.

could mean a permanent loss of markets), but this is a recent phenomenon and not necessarily permanent. 6/

Other Export Supports. Agricultural commodity exporters can also receive loans and loan guarantees for foreign sales. These are "blended" in such a way as to reduce taxpayer cost while promoting exports. In 1983, almost 15 percent of U.S. agricultural exports were financed either through blended credit or through export guarantees. The interest rate differential in the blended credit is estimated to cost taxpayers $35 million. The cost of the export guarantee credit is not easily determined. While the federal credit programs serve to increase agricultural exports, it is not clear to what extent private credit would have been available in their absence.

The federal government also promotes the export of agricultural products through Public Law 480 and other foreign aid programs. Since these are mainly undertaken for foreign policy or eleemosynary purposes, they are not counted as industrial support programs.

Transportation

Maritime operating subsidies are intended to make the U.S. merchant fleet competitive in the world market. By reducing U.S. shipping rates to the high end of the world market average, the operating subsidy has kept the fleet larger than it would otherwise have been although the long-term trend is downward. U.S. flag ships have decreased in number since 1960, and the percentage of U.S. trade carried by them has also declined, from 11.1 percent of total tonnage in 1960 to 3.7 percent in 1980. It should be noted that other industrial nations give larger subsidies to their merchant fleets. 7/

INVESTMENT AND INDUSTRIAL SUPPORT

Investment incentives and subsidies constitute a major portion of the industrial support programs. The three largest tax expenditure programs, ACRS, ITC, and lower rates on capital gains, totaling $50.4 billion in 1984,

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6. Congressional Budget Office, Agricultural Export Markets and the Potential Effects of Export Subsidies (June 1983).

7. Bernard Gardner and Peter Marlow, "An International Comparison of the Fiscal Treatment of Shipping," Journal of Industrial Economics (June 1983).

are all designed to increase investment. Many of the credit programs are also designed to promote investment. The REA, for example, makes below-market loans for rural cooperatives investing in new distribution, transmission, or generation facilities. Overall, the arithmetic total of the largest multisector investment incentives is roughly $50 to $60 billion. (Since tax expenditures cannot properly be added, this number does not represent a true total.) By way of context, non-residential fixed investment in 1982 totaled $350 billion and is expected to reach $370 billion in 1984. If so, federal support will be linked to roughly one-sixth of all investment dollars. In this section, the multisector incentives for investment are analyzed. Table 19 presents the programs.

Economists disagree over the extent to which these incentives encourage new investment. They also disagree over the form they should take: most analysts feel that the programs vary in their effectiveness. It is

TABLE 19. MULTISECTOR INVESTMENT INCENTIVES FOR 1984
(In billions of current dollars)

Program	Revenue Loss
Exclusion of Interest on State and Local Government Industrial Development Bonds	3.5
Accelerated Cost Recovery System	18.3
Safe Harbor Leasing Provisions	2.8
Preferential Treatment of Capital Gains a/	16.4
Investment Tax Credit	15.7

SOURCE: Congressional Budget Office and Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, joint committee print prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Other than in agriculture, timber, iron ore, and coal.

generally agreed, however, that the incentives are most used when other conditions favoring investment, such as market opportunity and business confidence, are present. 8/

Most investment incentives are intended to increase investment by reducing the cost of capital to the firm. Only the reduced rates for capital gains attempt to increase capital formation by directly increasing the after-tax income from capital. While investment is clearly stimulated by sales opportunities or improved business conditions, the responsiveness of investment to changes in the price of investment, in the absence of changes in business outlook, is less well established.

Common arguments in favor of the investment incentives are that they compensate for biases in other segments of the tax code, especially with regard to housing, savings, and inflation. For example, the home mortgage interest deduction costs the Treasury approximately $27.9 billion in 1983. By encouraging investment in housing, this provision in the tax code increases the cost of all other investment from the limited savings pool. Investment tax incentives, it is argued, help to undo the effects on capital costs of other provisions of the tax code.

A more general argument for public support of investment is that the deductibility of interest on debt, including home mortgages, rewards consumption and penalizes saving. The favorable tax treatment of capital gains provides an incentive to save and invest as a counter to this consumption bias.

A third bias of the tax code is the understatement of depreciation charges resulting from inflation. Since capital equipment prices rise each year with inflation, historical prices will not fully reflect replacement costs. Use of historical prices in the earlier depreciation system resulted in smaller capital recovery by investing firms. The Congress put the accelerated cost recovery system in place partly to compensate for this understatement of capital costs. Similarly, the lower tax rates on capital gains reflect the realization that at least part of the gains are illusory.

A side effect of the investment incentives, however, has been the introduction of new biases. Neither the ITC nor the ACRS provides neutral investment incentives. The ITC makes no pretense at neutrality. Only

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8. For a recent analysis of the effectiveness of ACRS in promoting new investment, see Valerie Amerkhail, "The Effect of Recent Corporate Tax Changes on Aggregate Investment and Real Growth," presented to the Allied Social Science Associations (December 1983).

durable equipment is eligible, thus biasing investment decisions against non-residential structures. The ACRS is also non-neutral because its benefits vary with the life and type of the investment. Jane Gravelle's study of the post-1982 effective tax rates on new investment by industry found that they varied among industries by more than a factor of two. At an inflation rate of 6 percent, the tax rate on new investment was 13 percent in construction, 29 percent in manufacturing, and 25 percent for the economy as a whole. 9/

Gravelle's study of tax rates also showed that, even within industries, the effective tax rate would vary considerably by type of investment. In general, equipment enjoys a lower effective rate than structures, which in turn have a lower rate than buildings. At a 6 percent rate of inflation the average tax rate on investment was 25 percent, while the rate for equipment was 9 percent and that for structures 33 percent. At 9 percent inflation, effective tax rates for equipment and structures become 20 and 33 percent respectively. 10/

The Joint Committee on Taxation recently prepared a study of effective tax rates by industry and found that the 1980-1982 average rate for each industry varied from a negative 3.5 percent for wood products to 40.3 percent for trucking. 11/ Such differences suggest that along with investment biases the tax code may also result in biases in the allocation of other resources.

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9. See Jane G. Gravelle, "Effective Corporate Tax Rates and Tax Changes in the 97th Congress," Congressional Research Service (January 3, 1983).

10. In his study of tax rates, Alan Auerbach reports that the intra-industry differential is as important as the inter-industry differential, if not more so. See Alan Auerbach, Corporate Taxation in the U.S. (October 1983, unpublished).

11. Joint Committee on Taxation, Study of 1982 Effective Tax Rates of Selected Large U.S. Corporations (1983).

CHAPTER VI. STRATEGIES FOR BUDGETARY CONTROL

To a very large extent, federal support for industry is provided outside the customary channels of budget review. The Congress does not formally consider tax expenditures anywhere in the budget process, except in the revenue target, and then only implicitly. Credit programs have been increasingly included in the budget process, but the Congress has not yet provided a uniform procedure for reporting the full costs of such programs. Four general strategies for bringing industrial support into the purview of the budget and increasing Congressional control over it would be:

- Changing programs when circumstances change;
- Making all support explicit;
- Raising the budgetary profile of tax support; and
- Implementing a credit budget.

CURRENT PRACTICE

The Congress reviews most direct spending programs annually in the budget process. It is thus able to weigh the contribution of each program against others, and to make explicit trade-offs among them. Tax expenditures, on the other hand, are considered only when they are passed, and then not in a budgetary context. The budgetary profile of credit programs is higher, but the present system understates new lending activity. This section discusses some of the ways in which tax expenditures and credit programs fall outside normal budget channels.

Tax Expenditures

Tax expenditures are incompletely included in the budget process for several reasons. The Congress does not, indeed cannot, vote on a meaningful tax expenditure aggregate, on the yearly increases in that aggregate, or on each tax expenditure program. Only in its vote on the revenue floor does the Congress vote on tax expenditures in the budget cycle, and then only implicitly. The Budget Act requires preparation of a publication totaling tax expenditures. However, this volume is used for informational purposes only.

The budget resolution does not count tax expenditures in any of the functional totals even though, in many cases, they provide as much aid as on-budget programs. Again, when the Budget Committees make trade-offs between functions in the concurrent resolution or for purposes of reconciliation, they do not count tax expenditures in any of the functional totals.

The Congressional committees responsible for each functional area do not consider tax expenditures, since these are the exclusive province of the tax-writing committees. This assignment has two consequences. First, when the authorization and appropriation committees report out their bills, they do not count the tax expenditure programs against their totals. Second, the Budget Committees vote on a revenue target and then direct the tax-writing committees to raise the appropriate amount. Whether those committees raise the revenues through reducing tax expenditures or through new taxes is at their own discretion. Thus, no definition or limit on tax expenditures enters into the budget process.

Credit Programs

Credit programs have a somewhat higher budget profile, but major elements--most notably, their costs to the government--are often not voted on. While the Congress votes on total new loan obligations, this does not necessarily translate into functional control of government costs. There are several reasons for this.

First, most loan costs do not show up in the first year or in any given year, but rather are spread over the lives of the loans. Thus, when the Congress makes subsidized loans it relinquishes control over some portion of future years' outlays. A certain percentage of any year's outlays will be the result of previous years' decisions and so will enter the uncontrollable portion of the budget.

Second, with revolving funds, the subsidy element is often not clearly discernible in the regular infusions of money the Congress gives revolving funds. The Congress may appropriate a given amount to restore the soundness of a fund, but cannot attribute this appropriation to any given year's subsidy. For example, the Rural Electrification and Telephone Revolving Fund has been drawing down its endowment at a rapid rate and may need an infusion of funds by the mid-1980s. However, no single year's or group of years' subsidies will be clearly identifiable in the appropriation.

The current budgetary treatment of credit programs lies somewhere between the treatment of spending programs before the 1974 Budget Act and the current treatment of spending programs. Credit programs are

considered in the aggregate, though currently in a non-binding way, in the budget resolution. Information on totals and trade-offs is available, but the binding decisions are still made on a program-by-program basis.

STRATEGIES FOR INCREASED BUDGETARY VISIBILITY AND CONTROL

The Congress has four principal avenues by which it could make industrial support programs visible in the budget and increase its control over them.

Increase the Responsiveness of Programs to Changed Circumstances

Federal aid to business often starts because particular markets are perceived as not meeting the needs of certain groups--for example, farmers--or because aid to certain business activities is considered to carry with it public benefits, as in the case of public utilities. Over time, the conditions that created a need for federal support change, rendering the original program unnecessary, duplicative, or even counterproductive. Nevertheless, institutional inertia often carries the program forward despite the changed circumstances. To prevent this, a formal mechanism might be desirable to remind the Congress of the need to review its programs.

One way would be to provide termination dates for industrial support legislation--so-called sunset clauses. As with all sunset clauses, these would call for review and revision of the programs in the light of changed circumstances. Such provisions have two major drawbacks. If a program is about to terminate, those benefiting from it may adjust their activities so as to increase their benefits while it lasts. For example, if a tax credit on research and development was scheduled to end, firms might speed up research and development activities in the time preceeding the deadline only to decrease them afterward. Rescheduling R&D expenditures just to meet a tax deadline might disrupt some research and result in less actual research being performed than would have otherwise been the case.

Second, the sunset clauses often come due at a time when the Congress is concerned with other, more pressing matters. If a large fraction of the many programs to promote commerce and industry had to be reauthorized every year, a significant portion of the Congressional calendar would be devoted to this activity.

Make Industrial Support Explicit

A general principal of budgeting is transparency--that is, making clear and explicit the actions and trade-offs involved. Making support "transparent" is, in this context, making explicit the size and direction of industrial support programs. Federal credit programs in particular suffer from a lack of clear definition of costs and recipients. Thus, a clearer presentation of the credit support component would be a first step in making choices explicit. 2/

Sometimes changing conditions alter a program in a way that the Congress did not explicitly intend. For example, changes in costs may make a program larger or smaller than intended by the Congress. Rural Electrification Administration (REA) loans were given a maximum interest rate of 5 percent, because the program was designed during a period when interest rates were lower than at present. Since then, market interest rates have risen while the REA maximum rate has not. In effect, the market has been permitted to determine the size of the subsidy--the differential between the maximum program interest rate and the rate the federal government is paying on its bonds. An alternative would have been to fix the differential between the program interest rates and the federal borrowing rate: rather than specifying a fixed rate, the Congress would have specified that the interest rate would be the federal rate minus a fixed differential. By setting the maximum budget authority for the loans and the size of the interest rate differential, the Congress would have determined the maximum level of subsidy.

In addition to setting the interest subsidy directly, the Congress could require systematic estimates of outlays due to defaults. As stated above, some programs carry loans in good standing long after prudent fiscal management would have declared them in default. The Congress would obtain a much clearer notion of default costs by standardizing the definitions of default and requiring that estimates of such costs be included in estimates of future program costs.

Credit programs, unlike spending programs, entail multiyear commitments. This adds an element of costs not included in the abovementioned interest rate differential and default costs. If the Congress decides to end a spending program, it will cease when the authorization ceases, although

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2. For a fuller discussion of transparency in an industrial support context, see Transparency for Positive Adjustment, Organization for Economic Cooperation and Development (Paris, 1983).

there may be some close-down costs. With loans, the close-down costs will continue for the life of the portfolio of loans.

Alternatively, government agencies could seek to sell their loans and loan guarantees in secondary markets, purchasing insurance to cover the guarantees. The difference between the sale price of a loan and its face value would be the market measure of government loan costs. Similarly, the cost of insurance would indicate the level of support provided by guarantees. Secondary markets for government loans with purchased private insurance to cover the government's contingent liability would be an economically efficient, if drastic, way of rendering industrial support transparent. A limitation is that not all loans or guarantees may be salable to private parties.

Industrial development bonds (IDBs) enable state and local governments to issue unlimited tax-free bonds for the purpose of constructing facilities for private corporations. The rapid increase in the use of IDBs in the last few years has resulted in increased tax expenditures, with less of the benefit flowing to business and more to the purchasers of the tax-free bonds. The Congress has no authority over the amount spent on these facilities in any given year. More important, in this context, the state and local governments set the budgetary priorities by deciding which industries will receive the IDB-built facilities. Furthermore, there is no limit on the number of bond issues any government can make, although there are some limits on the size of each issue. Thus, IDBs are neither fixed sums granted by the Congress to state and local governments to be spent at their discretion nor a larger program directed to various industries to be spent at the discretion of the Congress. If the Congress wanted to make such bond issues transparent, it could replace them with interest-rate subsidies to the states. The Congress would then have more control over the size and direction of the funds, and less would be lost to bondholders.

Raise the Budgetary Profile of Tax Expenditures

To obtain complete budgetary control of industrial support, the Congress would have to consider further incorporation of tax expenditures into the budget. This is because tax expenditures compose the bulk of industrial support. To a large extent, therefore, the budgetary status of industrial support programs depends on the budgetary status of tax expenditures.

The Task Force Proposal. A House task force on the budget process has proposed modifying the annual budget resolution to include a target for

changes in overall tax expenditures. The Ways and Means Committee would be responsible for choosing the composition of the changes.

The concept of "tax expenditure" as it is currently used is the static revenue loss associated with any departure from the "normal" or "reference" provisions of the tax structure. It does not include behavioral responses by taxpayers to changes in taxes. More important, there is some dispute as to which provisions of current corporate and individual income tax laws are "normal" and which are "special." The Joint Committee on Taxation (JCT) and CBO now have an agreement as to which provisions are considered to be "special," but their inventory differs in several important aspects from that used by the Administration. For example, the Administration defines the accelerated cost recovery system as part of the "normal" tax structure, whereas CBO and JCT do not. There are 12 other differences of this type. (Several are discussed in Chapter II.)

To include tax expenditures in the annual budget resolution, a decision would have to be made for each new change in the tax law as to whether it was a change in the "normal" tax structure or a change in a "special" provision of tax expenditure. The distinction would be clear-cut in many cases, but not in all. For example, there is disagreement as to whether or not the recently proposed change in the tax treatment of insurance companies constitutes a change in tax expenditures. Similar problems would arise with most changes in depreciation rules. Since the issues often have a large arbitrary component, decisions about them would have to be made politically. This role would fall to the Budget Committee, adding to the frictions that already beset the budget process. (It should be noted, however, that some arbitrary definitional problems already arise in administering the current Budget Act. But it is probably fair to say that definitional disputes would arise much more frequently in the area of tax expenditures than they do in the area of regular expenditures and revenues.)

Another problem to be overcome is that tax expenditure totals and the revenue target would interact in peculiar ways. Any change in the "normal" tax rate structure will simultaneously change most tax expenditure amounts, since they are measured relative to the normal tax structure. Thus if the budget resolution specified both an overall revenue target and a change in tax expenditures, and if some change in the normal tax rate structure was made to help achieve the revenue target, a decision would have to be made as to whether to measure the change in tax expenditures using the old or new normal rate structure. If the old rate structure was used to measure tax expenditures, the revenue effects of rate changes plus the change in tax expenditures would obviously not add up to the change in the revenue target.

Moreover, in estimating the change in the tax expenditure total, it must be remembered that there are strong interactions among special tax

provisions. A change in one tax expenditure can affect the value of many other tax expenditures--for example, if a sizable number of taxpayers are induced by the change not to itemize deductions. The same problem also exists on the outlay side. For example, a change in Aid to Families with Dependent Children (AFDC) will affect outlays on Food Stamps.

An Alternative Approach. The approach taken in the task force report creates fewer problems than another proposed approach that would not only specify a target for total tax expenditures but also allocate them among budget functions. The interaction problems inherent in doing this would be extraordinarily complex, since changes in one function would change tax expenditure amounts in other functions in significant ways, all the while interacting with changes in the normal rate structure. Arbitrary counting rules could be devised to solve such problems, but since different possible rules would affect different interest groups differently, the choices among possible rules might engender controversy.

Implement a Credit Budget

The current treatment of credit lies somewhere between the current treatment of direct spending and the pre-1974 treatment of direct spending: information on aggregate spending on credit programs is available, but the decisions that directly control lending are made on a program level. The House task force on the budget process recommended that the credit budget be fully incorporated into the Congressional budget procedures. The unified budget includes net lending for direct loans and only includes funding for guaranteed loans that default. While this is an accurate statement of the impact of lending programs on the cash requirements of the federal government, it understates new lending activity. The credit budget is designed to allow the Congress to control new lending activity in the aggregate.

The credit budget, which records new direct loans and new loan guarantees for each fiscal year, also attempts to correct for the understatement of the size of federal credit activities in the unified budget. In 1981, the federal government obligated $57 billion in new direct loans and committed $76 billion in new loan guarantees. Yet net on-budget direct lending, the only portion of the credit budget included in the unified budget, amounted to only $5 billion. The unified budget understates the amount of new federal credit extended each year in three respects; the credit budget corrects for this understatement in each case, as follows:

- Direct loans by off-budget agencies are excluded by law from unified budget totals. All direct loans are recorded in the credit budget.

- Loan guarantees are excluded by law from the budget totals, except in the event of default. They are fully counted in the credit budget.

- The unified budget records net loan disbursements. The credit budget records gross new credit activities.

The understatement in the unified budget has fostered the perception of federal credit as an almost costless form of federal assistance. The credit budget is designed to correct this perception by recording the total volume of new credit activities. Through the imposition of limitations on the authority of federal agencies to enter into new obligations for direct loans and new commitments for loan guarantees, the credit budget would also enhance Congressional control of individual credit programs.

APPENDIXES

APPENDIX A. RESTRICTIONS ON GOVERNMENT PURCHASES

The Congress has enacted several programs requiring government agencies to give preference to specified types of businesses. In most cases, the legislation protects domestic firms from foreign competition, although the Small Business Act promotes small business and the Labor Surplus Concerns Program gives preference to concerns operating in economically depressed areas.

These programs limit the number of potential suppliers to the government and thus raise costs. The amount of the subsidy is only the difference between the actual cost and the cost that would be incurred under full competition, not the total amount of the purchase. Since the value of the subsidy cannot be estimated, it has been omitted from this study as noted in Chapter I. The programs, their authority, and their purpose are briefly described on the following page.

TABLE A-1. RESTRICTIONS ON GOVERNMENT PURCHASES

Program	Authority	Purpose
Buy American Act	41 U.S.C. 10a-10d	To provide preference for domestic materials over foreign materials
Preference for U.S. Manufacturers	22 U.S.C. 295a	To provide preference for domestic manufacturers in the construction of diplomatic establishments
	16 U.S.C. 560a	To restrict the U.S. forest service from purchasing twine manufactured from materials of foreign origin
Preference for U.S. Products	22 U.S.C. 2354(a)	To require the purchase of U.S. end products for the military assistance program
Preference for U.S. Food Clothing, and Fibers (Berry Amendment)	P.L. 91-171, Sec.624	To restrict the Department of Defense from purchasing specified classes of commodities of foreign origin
Prohibition of Construction of Naval Vessels in Foreign Shipyards	P.L. 91-171, Title IV	To prohibit the use of appropriated funds for the construction of any Navy vessel in foreign shipyards

(Continued)

TABLE A-1. RESTRICTIONS ON GOVERNMENT PURCHASES (Continued)

Program	Authority	Purpose
Acquisition of Foreign Buses	P.L. 90-500, Sec.404	To restrict the use of appropriated funds to purchase, lease, rent, or otherwise acquire foreign-manufactured buses
Required Source for Jewel Bearings	DAR 7-104.37	To preserve a mobilization base for manufacture of jewel bearings
Preference to U.S. Vessels	10 U.S.C. 2631, 46 U.S.C. 1241	To require shipment of all military and at least half of other goods in U.S. vessels
Small Business Act	15 U.S.C. 631-647; see also 41 U.S.C. 252(b) and 10 U.S.C. 2301	To place a fair portion of government purchases and contracts with small business concerns
Labor Surplus Concerns	Defense Manpower Policy No. 4, 32A CFR 33 (Supp. 1972)	To provide preference to concerns performing in areas of concentrated unemployment or unemployment

SOURCE: Commission Studies Program.

APPENDIX B. INDUSTRIAL SUPPORT BY PROGRAM

This appendix presents industrial support by program. Table B-1 lists the tax expenditure, B-2 the credit, and B-3 the direct expenditure estimates. See Chapter II for the definition and measurement of each estimate category.

In several cases, the estimate represents only part of the total aid provided under the indicated program. The tables in this appendix include only the loans and expenditures that aid industry, not those that may serve infrastructure or other needs. Community Development Block Grants, energy research and development, and energy conservation activities are among those only partially included.

TABLE B.1 TAX EXPENDITURE ESTIMATES
(In millions of dollars)

Category	1984	1985	1986	1987	1988
Deferral of income of Domestic International Sales Corporations (DISCs)	1,185	1,075	1,050	1,075	1,110
Deferral of income of controlled foreign corporations	345	375	390	420	455
Expensing of research and development expenditures	2,490	2,485	2,550	2,615	2,670
Credit for increasing research activities	685	700	335	70	25
Suspension of regulations relating to allocation under section 861 of research and experimental expenditures	60	-- a/	--	--	--
Expensing of exploration and development costs					
oil and gas	1,240	1,405	1,595	1,735	1,845
other fuels	30	35	35	40	40
Excess of percentage over cost depletion					
oil and gas	1,705	1,750	1,875	2,015	2,180
other fuels	365	370	395	425	460
Capital gains treatment of royalties from coal	185	200	220	240	260
Alternative fuel production credit	20	25	40	105	285
Alcohol Fuel Credit	5	5	5	5	5
Exclusion of interest on state and local government industrial development bonds for energy production facilities	30	45	60	75	95
Alternative conservation and new technology credits					
supply incentives	210	180	100	35	20
conservation incentives	35	15	5	-- a/	--

(Continued)

TABLE B.1 (Continued)

Category	1984	1985	1986	1987	1988
Energy credit for intercity buses	5	5	-- a/	--	--
Expensing of exploration and development costs, nonfuel minerals	60	65	75	80	85
Excess of percentage over cost depletion, nonfuel minerals	305	325	350	370	395
Capital gains treatment of certain timber income	515	580	675	780	825
Investment credit and seven-year amortization for reforestation expenditures	10	10	10	10	10
Capital gains treatment of iron ore	10	10	10	10	20
Exclusion of interest on state and local government pollution control bonds	1,530	1,705	1,875	2,055	2,255
Exclusion of payments in aid of construction of water, sewage, gas, and electric utilities	75	75	80	75	70
Expensing of certain capital outlays	585	605	630	645	670
Capital gains treatment of certain income	510	535	570	585	610
Deductability of patronage dividends and certain other items of cooperatives	580	600	615	640	660
Exclusions of certain cost-sharing payments	45	40	30	25	25
Dividend Exclusion	435	440	450	460	480
Reinvestment of dividends in stock of public utilities	415	450	230	--	--
Exclusion of interest on state and local government industrial development bonds	3,465	4,065	4,860	5,565	5,925

(Continued)

TABLE B.1 (Continued)

Category	1984	1985	1986	1987	1988
Exemption of credit union income	185	200	220	240	260
Excess bad debt reserves of financial institutions	575	785	930	1,060	1,030
Depreciation on rental housing in excess of straight-line	820	885	930	975	1,005
Depreciation on buildings other than rental housing in excess of straight-line	365	400	450	495	545
Accelerated depreciation on equipment other than leased property	18,325	21,705	20,270	16,365	15,805
Safe harbor leasing:					
accelerated depreciation and deferral	1,885	1,635	1,285	1,040	525
investment credit	915	705	710	515	280
Amortization of business start-up costs	180	255	315	350	395
Capital gains other than agriculture, timber, iron ore, and coal	16,395	17,495	18,745	20,065	21,515
Reduced rates on the first $100,000 of corporate income	6,525	7,025	8,060	8,765	9,090
Investment credit, other than ESOPs, rehabilitation of structures, reforestation, and leasing	15,665	19,690	23,815	25,895	27,455
Amortization of motor carrier operating rights	75	55	20	5	-- a/
Deferral of tax on shipping companies	40	40	45	45	45
Five-year amortization for housing rehabilitation	60	60	60	60	60

(Continued)

TABLE B.1 (Continued)

Category	1984	1985	1986	1987	1988
Investment credit for rehabilitation of structures other than historic structures	365	345	360	395	435
Tax credit for ESOPs	1,375	1,875	2,235	2,330	950
Tax credit for corporations receiving income from doing business in U.S. possessions	1,075	1,135	1,240	1,375	1,525

SOURCE: Joint Committee on Taxation, Estimates of Federal Tax Expenditures for Fiscal Years 1983-1988, prepared for the Committee on Ways and Means and the Committee on Finance (March 7, 1983).

a. Less than $2,500,000.

TABLE B.2 CREDIT PROGRAM ESTIMATES
(In millions of dollars)

Category	1984	1985	1986	1987	1988
Overseas Private Investment Corporation					
Direct loan obligations	10	11	11	12	12
Primary loan guarantee commitments	105	110	115	119	124
Export-Import Bank					
Direct loan obligations	2,475	3,830	3,830	3,830	3,830
Primary loan guarantee commitments	9,000	10,000	10,000	10,000	10,000
Support expenditures	934	560	148	-3	51
Rural Electrification and Telephone Revolving Fund					
Direct loan obligations	4,460	4,897	4,634	4,721	4,893
Support expenditures	3,966	3,977	3,897	3,920	3,944
Farmers Home Administration Agricultural Credit Insurance Fund					
Direct loan obligations	4,656	4,769	4,881	4,988	5,071
Primary loan guarantee commitments	1,331	1,331	1,331	1,331	1,331
Support expenditures	831	968	923	864	871
Business and Industrial Loan Program					
Primary loan guarantee commitments	314	329	343	357	371
Support expenditures	10	12	14	16	18
Commodity Credit Corporation					
Direct loan obligations	7,433	6,782	7,100	7,973	7,947
Primary loan guarantee commitments	3,000	3,000	3,000	3,000	3,000
Support expenditures	2,091	1,508	1,689	1,617	1,440

(Continued)

TABLE B.2 (Continued)

Category	1984	1985	1986	1987	1988
Government National Mortgage Association					
Guarantees of Mortgage-Backed Securities					
Direct loan obligations	3	3	3	3	3
New secondary loan guarantee commitments	71,458	74,870	78,146	81,286	84,357
International Trade Administration					
Direct loan obligations	12	12	12	12	12
Primary loan guarantee commitments	28	28	28	28	28
National Oceanic and Atmospheric Administration					
Federal Ship Financing Fund					
Primary loan guarantee Commitments	38	60	63	66	68
Fisheries Loan Fund					
Primary loan obligations	6	7	7	7	7
Small Business Administration					
Pollution Control Equipment Contract Guarantee Revolving Fund					
Primary loan guarantee commitments	250	250	250	250	250
Business Loan and Investment Fund					
Direct loan obligations	1,479	1,265	1,220	1,204	1,187
Primary loan guarantee commitments	2,890	2,890	2,890	2,890	2,890
Support expenditures	625	641	659	680	709
Disaster Loan Fund					
Direct loan obligations	289	301	316	328	341
Support expenditures	40	40	42	42	44

(Continued)

TABLE B.2 (Continued)

Category	1984	1985	1986	1987	1988
Salaries and Expenses					
Support expenditures	254	258	265	270	275
Federal Railroad Administration					
Administration, Research and Special Projects					
Primary loan guarantee commitments	15	15	---	---	---
Railroad Rehabilitation and Improvement Financing Fund					
Direct loan obligations	38	40	41	43	45
Primary loan guarantee commitments	33	31	30	28	27
Federal Aviation Administration					
Aircraft Purchase Loan Guarantee Program					
Primary loan guarantee commitments	80	80	80	80	80
Maritime Administration					
Federal Ship Finance Fund					
Direct loan obligations	26	27	29	30	31
Primary loan guarantee commitments	450	200	200	200	200
Economic Development Administration					
Primary loan guarantee commitments	170	170	170	170	170
Health Resources and Services Administration					
Health Maintenance Organization Loan and Loan Guarantee Fund					
Direct loan obligations	25	25	25	25	25
Primary loan guarantee commitments	25	25	25	25	25

SOURCE: Congressional Budget Office.

TABLE B.3 DIRECT EXPENDITURE ESTIMATES BY PROGRAM
(In millions of dollars)

Category	1984	1985	1986	1987	1988
Fossil Energy Research and Development	398	353	352	366	384
Energy Supply, Research and Development Activities	1,450	1,479	1,570	1,648	1,729
Energy Conservation	154	119	113	116	119
Synthetic Fuels Corporation	100	68	111	134	139
Geological Survey	399	410	416	425	435
Bureau of Mines	137	148	157	161	166
Federal Crop Insurance Corporation	377	416	434	454	463
Commodity Credit Corporation	6,137	7,342	8,002	8,467	8,892
Extension Service	340	357	375	391	407
Agricultural Research Service	468	478	490	500	512
Cooperative State Research Service	254	267	281	295	310
Agricultural Marketing Service	40	40	41	41	42
Foreign Agricultural Service	77	80	82	85	88
National Bureau of Standards	112	119	122	124	127
International Trade Administration Operations and Administration	164	177	182	185	188
Department of Defense Manufacturing Technology Program	210	295	332	437	582
Federal Aviation Administration Aircraft Purchase Program	250	--	--	--	--
Research, Engineering, and Development	104	111	114	118	123
Civil Aeronautics Board Payments to Air Carriers	50	53	55	57	60

(Continued)

TABLE B.3 (Continued)

Category	1984	1985	1986	1987	1988
National Aeronautics and Space Administration					
Air Transportation Research and Program Management	240	247	250	253	256
Research and Development	264	279	299	314	330
Coast Guard Research, Development, Test and Evaluation	19	21	22	23	24
Maritime Administration					
Operating-differential subsidies	425	445	464	483	501
Research and Development	17	17	17	18	19
Community Development Grants	441	461	433	444	463
Urban Development Action Grants	611	563	533	553	494
Economic Development Administration					
Salaries and expenses	25	25	25	26	26
Economic development	291	322	319	286	272
Corporation for Public Broadcasting	130	130	130	135	140

SOURCE: Congressional Budget Office.